

AD-A131 980

19320C MLRS MISSILE NUMBERS V61-004 V61-013 V61-025  
ROUND NUMBER 458/AT2-... (U) ARMY ELECTRONICS RESEARCH  
AND DEVELOPMENT COMMAND WSMR NM ATM... D C KELLER  
05 JUL 83 ERADCOM/ASL-DR-1305

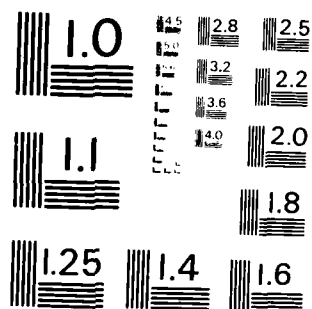
1/1

UNCLASSIFIED

F/G 4/2

NL


END  
DATE  
FILMED  
DTIC



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

(12)

METEOROLOGICAL DATA REPORT

19320C MLRS

Missile Numbers V61-004,

V61-013, V61-025

Round Number 458/AT2-28,

459/AT2-29, 460/AT2-30

5 JULY 1983

by

DONALD C. KELLER

Program Support Coordinator

Phone Number (505) 679-9568

AVN Number 349-9568

AD A 131980

ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

Copy available to DTIC does not  
permit fully legible reproduction

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

DTIC FILE COPY

83 08\_30 051

## **DISCLAIMER NOTICE**

**THIS DOCUMENT IS BEST QUALITY  
PRACTICABLE. THE COPY FURNISHED  
TO DTIC CONTAINED A SIGNIFICANT  
NUMBER OF PAGES WHICH DO NOT  
REPRODUCE LEGIBLY.**

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1305	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19320C MLRS Missile Number V61-004, V61-013, V61-025 Round Number 458/AT2-28, 459/AT2-29, 460/AT2-30		5. TYPE OF REPORT & PERIOD COVERED
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) White Sands Meteorological Team		8. CONTRACT OR GRANT NUMBER(s) DA Task 1F665702D127-02
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		12. REPORT DATE July 1983
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research and Development Cmd Adelphi, MD 20783		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19320C MLRS, Missile Number V61-004, V61-013, V61-025, Round Number 458/AT2-28, 459/AT2-29, 460/AT2-30 are presented in tabular form.		

DISPOSITION INSTRUCTIONS

OVERSEAS  
COVER

Destroy this report when it is no longer needed. Do not return to the originator.

DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

The citation of trade names and names of manufacturers in this report is not to be construed as official Government indorsement or approval of commercial products or services referenced herein.

1. Date of Report	
2. Report No.	
3. Distribution/Classification	
By _____	
Distribution/Availability Codes	
Avail and/or Special	
Dist	Special
A	



REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1305	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19320C MLRS Missile Number V61-004, V61-013, V61-025 Round Number 458/AT2-28, 459/AT2-29, 460/AT2-30		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s)  White Sands Meteorological Team		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s)  DA Task 1F665702D127-02
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research and Development Cmd Adelphi, MD 20783		12. REPORT DATE July 1983
		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report)  UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)  Approved for public release; distribution unlimited		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  Meteorological data gathered for the launching of the 19320C MLRS, Missile Number V61-004, V61-013, V61-025, Round Number 458/AT2-28, 459/AT2-29, 460/AT2-30 are presented in tabular form.		

# CONTENTS

INTRODUCTION-----	PAGE 1
DISCUSSION-----	1
GENERAL AREA MAP-----	2
LAUNCH AREA DIAGRAM-----	3
TABLES:	
1. Surface Observations taken at 1000 MDT at LC-33-----	4
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, taken at 1000 MDT-----	5
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 1000 MDT-----	5
4. Launch and Impact Pilot-Balloon Measured Wind Data---	6
5. Aiming and T-Time Computer Met Messages-----	7
6. LC-37 Significant Level Data at 0800 MDT-----	8
7. LC-37 Upper Air Data at 0800 MDT-----	9
8. LC-37 Mandatory Levels at 0800 MDT-----	10
9. WSD Significant Level Data at 0823 MDT-----	11
10. WSD Upper Air Data at 0823 MDT-----	12
11. WSD Mandatory Levels at 0823 MDT-----	39
12. LC-37 Significant Level Data at 1000 MDT-----	40
13. LC-37 Upper Air Data at 1000 MDT-----	41
14. LC-37 Mandatory Levels at 1000 MDT-----	42



## INTRODUCTION

19320C MLRS, Missile Numbers V61-004, V61-013 and V61-025, Round Numbers 458/AT2-28 459/AT2-29 and 460/AT2-30, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1000:01, 1000:06 and 1000:11 MDT, 5 July 1983. The scheduled launch times were 1000, 1000:04.5 and 1000:09 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from Pilot-balloon observations at:

#### SITE AND ALTITUDE

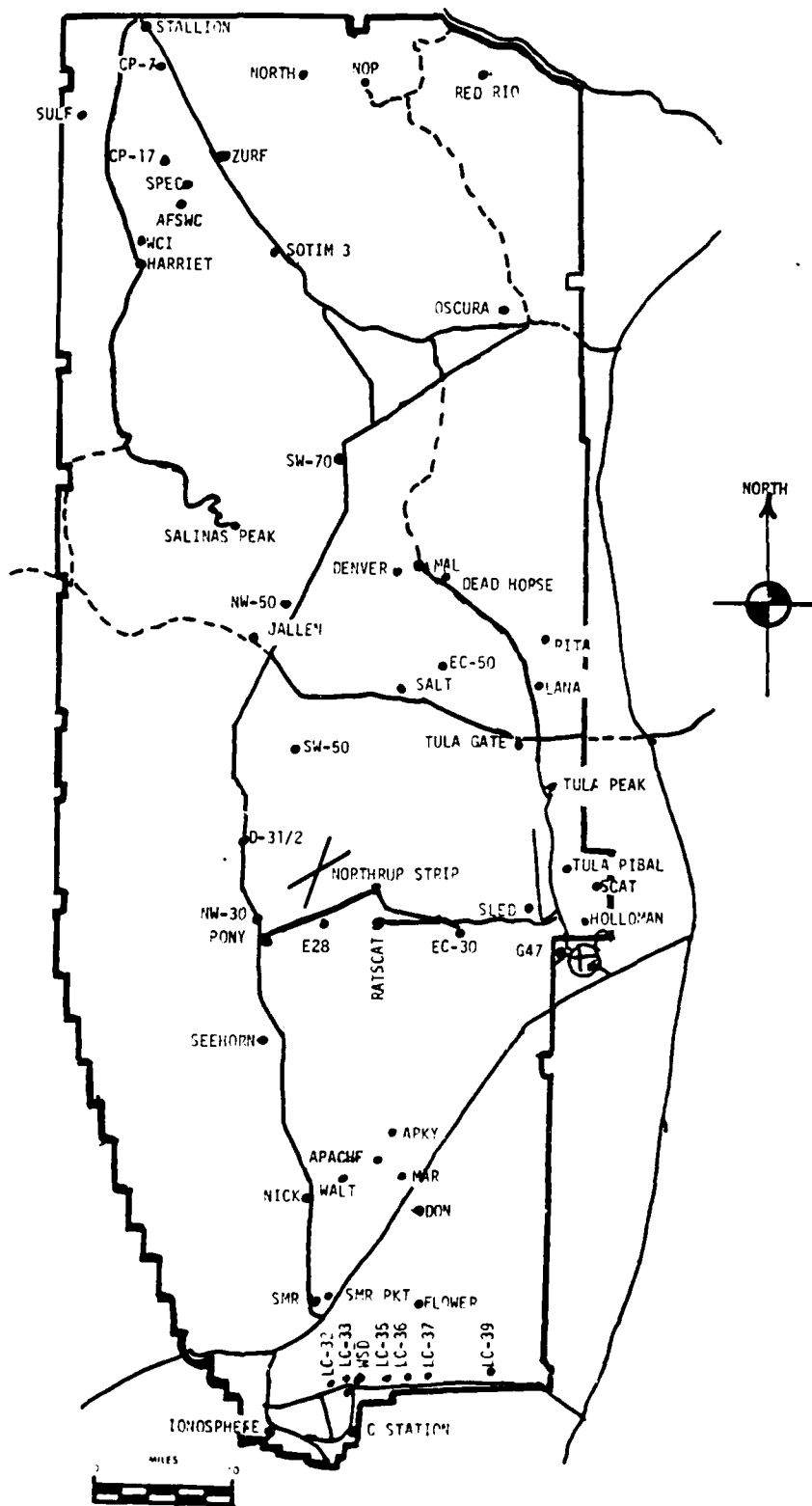
LC-33	2km
DON	2km

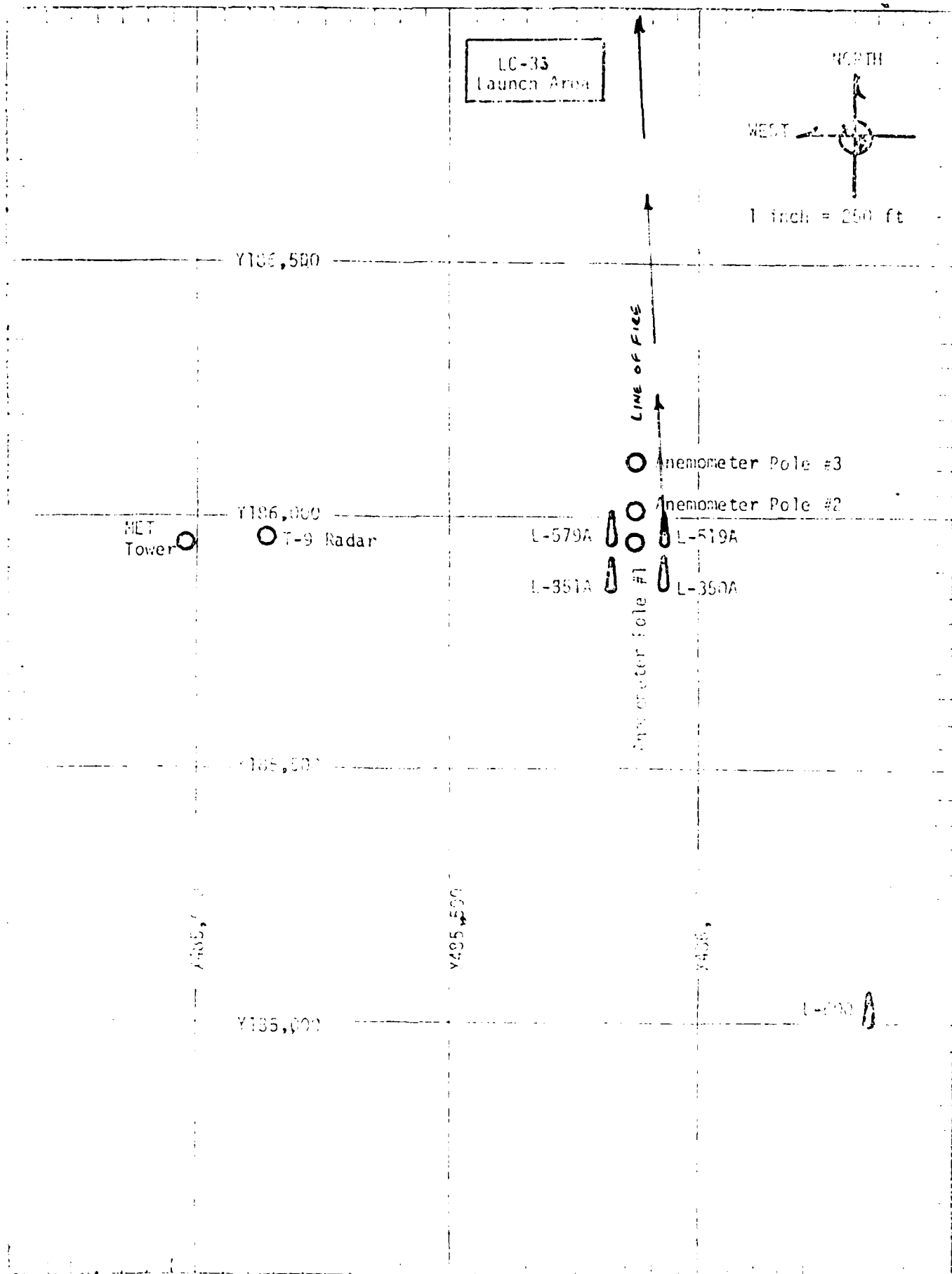
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

#### SITE AND TIME

LC-37	0800 MDT
WSD	0823 MDT
WSD	1000 MDT

# WSMR METEOROLOGICAL SITES





# PROJECT SURFACE OBSERVATION

TABLE 1		STATION LC-33	
---------	--	---------------	--

DATE 05 JUL 1983	Y= 484,982.64	Y= 185,957.73	H= 3995.00
------------------	---------------	---------------	------------

TIME M D T	PRESSURE mb	TEMPERATURE °C	DEW POINT °C	RELATIVE HUMIDITY %	WIND SPEED kts	WIND DIRECTION degs	WIND CHARACTER kts	VISIBIL- ITY
1000	885.3	29.4	12.1	35	08	360		25

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	HGT	AMT	TYPE	HGT	
	0	CU	6,500	5	CI	25,000	H ALQDS

## PSYCHROMETRIC COMPUTATION

TIME:	1000	
DRY BULB TEMP.	29.4	
WET BULB TEMP.	17.9	
WET BULB DEPR.	11.5	
DEW POINT	12.1	
RELATIVE HUMID.	35	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDSDATE 5 JUL 83 1000 M D T  
DAY MONTH YEAR TIME

\*\*

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T -30	002	15	T -30	002	11	T -30	015	18
T -20	002	15	T -20	010	10	T -20	015	17
T -10	002	14	T -10	002	10	T -10	012	17
T 0.0	002	13	T 0.0	001	10	T 0.0	015	16
T +10	002	16	T +10	005	12	T +10	017	17

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T -30	360	04	T -30	002	13
T -20	022	04	T -20	012	10
T -10	024	05	T -10	022	14
T 0.0	001	07	T 0.0	005	16
T +10	021	07	T +10	360	12

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T -30	014	14	T -30	004	12
T -20	017	14	T -20	006	12
T -10	009	15	T -10	002	14
T 0.0	008	15	T 0.0	357	13
T +10	003	15	T +10	357	12

\*\* Pole #1 Dirs. Estimated

TABLE 4

## T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 5 JUL 83

SITE: LC-33

TIME: 1000 MDT

WSTM COORDINATES:

X= 484,837.34

Y= 184,124.44

H= 3,975.57

SITE: DON

TIME 1000 MDT

WSTM COORDINATES:

X= 511,988.37

Y= 247,396.36

H= 3,996.83

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	010	10
150	008	13
210	007	14
270	007	15
330	004	15
390	353	10
500	340	11
650	343	11
800	354	08
950	022	06
1150	053	09
1350	073	14
1550	073	16
1750	066	18
2000	078	18

Data obtained from a Double  
Theodolite Tracked pilot-balloon  
observation.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		CALM
150	007	12
210	003	15
270	356	15
330	350	16
390	346	16
500	340	16
650	356	14
800	002	14
950	005	11
1150	062	07
1350	098	09
1550	146	13
1750	102	08
2000	071	05

Data obtained from a Single  
Theodolite Tracked pilot-balloon  
observation.

## AIMING AND T-TIME COMPUTER MET MESSAGES

5 July 1983

LC-37 0800 MDT

METCMI324063

051400124333

00000000 29900883

01631008 29870873

02583011 29760849

03546003 29500810

04136014 29330765

05119012 29030721

06140016 28680680

07113017 28270640

08069017 27820603

09035020 27330567

WSD 0823 MDT

METCMI324064

051440122883

00000000 30110883

01602003 30060873

02575005 29780849

03620005 29460811

04142013 29330765

05120013 29050721

06140015 28680680

07127016 28250641

08093016 27840603

09020015 27420567

LC-37 1000 MDT

METCMI324063

051600124884

00622012 30280884

01630022 30160874

02609016 29880849

03113003 29590811

04151013 29240766

05134015 28990722

06144015 28620681

07125021 28170641

08093021 27760603

09071020 27300567

GEODETIC COORDINATES  
32.40175 LAT DEG  
106.31232 LON DEG

SIGNIFICANT LEVEL DATA  
18001800394  
LC-37

TABLE 6

STATION ALTITUDE 4051.37 FEET MSL  
5 JULY 83 0800 MDT  
ASCENSION NO. 94

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
833.2	4351.4	23.5	15.1	59.0
864.9	4653.0	23.1	15.2	61.0
850.0	5151.4	22.4	15.0	63.0
809.9	6529.0	19.8	11.8	60.0
764.5	7430.5	19.0	3.6	36.0
774.8	7782.2	20.1	2.9	32.0
700.0	10630.2	15.0	-7.7	20.0
552.3	12555.0	10.5	-7.2	28.0
608.2	14473.1	5.1	-7.7	39.0
578.9	15790.4	1.3	-3.0	73.0
503.5	16501.5	-1.5	-4.3	31.0
548.2	17222.0	-2.6	-9.5	59.0
531.2	18044.5	-2.5	-11.7	64.0
500.0	19614.5	-5.9	-24.1	22.0



STATION ALTITUDE 4051.37 FEET MSL  
 5 JULY 83 0800 MDT  
 ASCENSION NO. 94

UPPER AIR DATA  
 1807190304  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LONG DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/LUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4051.4	583.2	22.6	15.1	59.0	1029.2	673.6	0.0	0.0	1.000303
4500.0	869.5	23.2	15.2	50.5	1014.4	673.2			1.000301
5000.0	854.5	22.6	15.1	62.4	998.8	672.5			1.000297
5500.0	839.7	21.7	14.2	62.2	984.7	671.5			1.000290
6000.0	825.1	20.8	13.0	61.2	971.1	670.2			1.000282
6500.0	810.7	19.9	11.9	60.1	957.6	669.0			1.000275
7000.0	796.5	19.4	7.9	47.5	947.7	668.0		5.7	1.000258
7500.0	782.6	19.2	3.5	35.2	928.9	667.4		8.9	1.000242
8000.0	768.8	19.7	2.2	31.1	911.3	667.9		12.5	1.000235
8500.0	755.2	18.8	.4	29.0	898.3	666.7		12.5	1.000228
9000.0	741.9	17.9	-1.4	26.9	885.4	665.6		12.2	1.000222
9500.0	728.8	17.0	-3.3	24.8	872.7	664.5		12.5	1.000216
10000.0	715.9	16.1	-5.2	22.7	860.2	663.3		12.9	1.000210
10500.0	703.3	15.2	-7.2	20.5	847.9	662.2		14.1	1.000205
11000.0	690.7	14.1	-7.5	21.5	835.9	660.9		15.5	1.000202
11500.0	678.3	13.0	-7.3	23.6	824.2	659.6		16.4	1.000200
12000.0	666.1	11.8	-7.2	25.7	812.7	658.3		17.2	1.000198
12500.0	654.1	10.6	-7.2	27.8	801.3	656.9		16.7	1.000195
13000.0	642.2	9.2	-7.2	30.6	790.5	655.4		16.4	1.000193
13500.0	630.4	7.6	-7.2	33.4	779.9	653.7		15.7	1.000191
14000.0	618.9	6.4	-7.4	36.3	769.5	652.1		15.7	1.000188
14500.0	607.6	5.0	-7.5	39.7	759.3	650.5		17.0	1.000186
15000.0	596.3	3.6	-5.2	52.6	748.7	648.9		18.4	1.000187
15500.0	585.2	2.1	-3.6	65.5	738.4	647.4		19.7	1.000183
16000.0	574.7	.5	-3.4	75.4	728.9	645.4		20.8	1.000187
16500.0	563.5	-1.5	-4.3	81.0	727.5	643.1		20.7	1.000185
17000.0	552.9	-2.3	-7.6	65.8	709.3	641.9		20.4	1.000176
17500.0	542.4	-2.0	-10.2	55.6	696.9	641.5		19.1	1.000170
18000.0	532.1	-2.5	-11.6	49.5	683.7	641.5		18.0	1.000165
18500.0	522.0	-3.5	-14.8	41.2	673.3	640.2			1.000160
19000.0	512.0	-4.6	-18.5	32.6	663.4	638.8			1.000155
19500.0	502.2	-5.7	-23.0	24.0	653.6	637.4			1.000151

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4051.77 FEET MSL  
 5 JULY 83 0800 MDT  
 ASCENSION NO. 74

MANDATORY LEVELS  
 1P60180094  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

TABLE 8

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
950.0	5148.	22.4	15.0	53.	9999.0	9999.0XX	
500.0	6872.	19.5	9.0	51.	9999.0	9999.0XX	
750.0	6693.	18.5	-1.3	28.	71.2	12.4	
700.0	1620.	15.0	-7.7	20.	75.4	14.5	
650.0	1659.	10.2	-7.2	29.	67.8	16.6	
400.0	14819.	4.1	-5.0	48.	38.0	18.0	
550.0	17114.	-2.5	-8.8	62.	19.5	20.0	
500.0	19586.	-5.9	-24.1	22.			

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

GFODEETIC COORDINATES  
 52.40365 LAT DEG  
 106.37933 LON DEG

SIGNIFICANT LEVEL DATA  
 106.0070337  
 WHITE SANDS  
 TABLE 9

STATION ALTITUDE 5039.00 FEET MSL  
 5 JULY 85 0823 HRY  
 ASCENSION NO. 337

PRESSURE	GEOMETRIC ALTITUDE	AIR TEMPERATURE	REL. HUM.
MILLIBARS	MSL FEET	DEGREES CENTIGRADE	PERCENT
987.3	3999.0	25.9	53.0
875.5	4245.9	25.8	47.0
850.0	5097.2	22.7	53.0
809.6	6483.8	19.2	51.0
768.0	7246.3	18.8	49.0
777.4	7631.1	20.0	32.0
735.2	9155.9	17.7	24.0
700.0	10574.1	15.1	22.0
630.7	13435.3	7.7	33.0
594.5	15075.5	3.6	47.0
574.5	15936.2	1.4	55.0
526.9	16787.4	-1.2	83.0
543.3	17405.0	-2.7	75.0
525.0	17806.7	-2.7	34.0
527.0	18230.1	-2.0	24.0
500.0	19366.5	-5.3	27.0
454.4	2035.4	-12.0	44.0
449.2	22295.0	-12.5	44.0
437.8	22939.8	-13.5	31.0
426.5	23592.0	-15.4	23.0
412.2	24439.4	-15.4	19.0
400.0	25183.2	-17.3	20.0
345.3	28754.0	-24.6	19.0
300.0	32075.7	-32.6	21.0
264.9	34922.2	-39.4	22.0
250.0	36219.1	-42.5	
225.8	38456.5	-48.3	
200.0	41055.0	-54.2	
184.6	42736.6	-57.3	
168.5	44622.5	-60.9	
155.5	46250.3	-65.5	
150.0	46970.9	-66.4	
131.5	49571.0	-70.9	
126.6	50366.6	-69.5	
116.5	51945.9	-70.9	
110.4	53006.1	-66.6	
103.3	54213.3	-68.4	
100.0	54726.4	-67.8	
70.0	59706.3	-63.4	
70.0	62163.4	-62.1	

GEODETIC COORDINATES  
32.60743 LAT DEG  
106.37033 LON DEG

SIGNIFICANT LEVEL DATA

180000337  
WHITE SANDS

TABLE 9 CONT'D

STATION ALTITUDE 3929.00 FEET MSL  
5 JULY 53 0823 MDT  
ASCENSION NO. 337

PRESSURE GEOMETRIC MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR	DEWPOINT DEGREES CELSIUS	
54.5 67350.2	-55.8		
50.0 69155.0	-57.7		
43.9 71893.7	-53.7		
30.0 80018.4	-51.9		
27.6 81806.0	-51.4		
20.0 89550.0	-43.8		
14.3 95551.5	-43.5		
10.0 104323.5	-41.7		
9.0 106686.2	-42.3		

STATION ALTITUDE 194.00 FEET MSL  
5 JULY 83 0823 MDT  
ASCENSION NO. 117

UPPER AIR DATA  
180000Z  
WHITE SANDS

GEODETTIC COORDINATES  
32.40043 LAT DEG  
106.37053 LON DEG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TV)	WIND SPEED KNOTS	INDEX OF REFRACTION
3535.0	393.3	25.2	53.0	1021.1	676.3	338.0	0	1.000333
4000.0	375.0	25.2	52.7	1020.4	676.3	338.0	0	1.000302
4100.0	375.5	25.2	50.4	1017.8	676.1	338.0	5	1.000298
4200.0	376.9	25.6	48.1	1014.7	675.9	338.0	5	1.000294
4300.0	373.2	25.6	47.4	1013.1	675.6	338.0	1.3	1.000292
4400.0	370.8	25.2	48.1	1009.9	675.2	338.0	1.3	1.000291
4500.0	374.3	24.9	48.8	1007.6	674.8	338.0	2.2	1.000290
4600.0	374.3	24.2	49.5	1005.4	674.4	338.0	2.6	1.000289
4700.0	371.8	24.1	50.2	1003.1	674.0	338.0	3.1	1.000288
4800.0	368.8	23.3	50.9	1000.9	673.5	338.0	3.5	1.000286
4900.0	365.5	23.4	51.5	998.7	673.1	338.0	3.9	1.000287
5000.0	362.9	23.1	52.3	996.5	672.7	338.0	4.4	1.000286
5100.0	360.2	22.7	53.0	994.3	672.3	338.0	4.8	1.000285
5200.0	356.9	22.4	53.6	991.7	672.0	338.0	5.2	1.000284
5300.0	354.0	22.2	54.2	989.7	671.7	338.0	5.7	1.000283
5400.0	351.0	21.9	54.7	986.4	671.4	338.0	6.1	1.000282
5500.0	348.1	21.7	55.3	983.8	671.1	338.0	6.5	1.000281
5600.0	345.1	21.4	55.9	981.2	670.8	338.0	6.9	1.000280
5700.0	342.2	21.2	56.5	978.6	670.5	339.0	7.0	1.000279
5800.0	339.3	20.9	57.1	976.0	670.2	340.0	6.5	1.000278
5900.0	336.4	20.7	57.6	973.5	669.9	341.0	6.2	1.000277
6000.0	333.5	20.4	58.2	970.9	669.7	341.0	5.0	1.000275
6100.0	330.6	20.2	58.8	968.3	669.4	342.0	5.5	1.000274
6200.0	327.7	19.9	59.4	965.8	669.1	342.0	4.4	1.000271
6300.0	324.8	19.7	59.9	963.2	668.8	343.0	4.0	1.000269
6400.0	321.9	19.4	60.5	960.7	668.5	344.0	3.0	1.000266
6500.0	319.0	19.2	60.7	958.1	668.2	345.0	4.5	1.000264
6600.0	316.1	19.1	59.2	955.6	668.1	346.0	4.5	1.000262
6700.0	313.2	19.1	57.5	953.0	668.0	347.0	5.0	1.000259
6800.0	310.3	19.0	56.0	950.4	667.9	348.0	5.7	1.000257
6900.0	307.4	18.9	54.5	947.9	667.8	349.0	6.4	1.000254
7000.0	304.5	18.9	52.9	945.3	667.6	350.0	7.2	1.000249
7100.0	301.6	18.8	51.3	942.8	667.4	351.0	7.9	1.000244
7200.0	298.7	18.7	49.8	940.2	667.3	352.0	8.6	1.000240
7300.0	295.8	18.6	48.3	937.7	667.2	353.0	9.3	1.000237
7400.0	292.9	18.5	46.8	935.1	667.1	354.0	10.0	1.000235
7500.0	290.0	18.4	45.3	932.6	667.0	355.0		
7600.0	287.1	18.3	43.8	930.0	666.9	356.0		
7700.0	284.2	18.2	42.3	927.5	666.8	357.0		
7800.0	281.3	18.1	40.8	924.9	666.7	358.0		
7900.0	278.4	18.0	39.3	922.4	666.6	359.0		
8000.0	275.5	17.9	37.8	919.8	666.5	360.0		
8100.0	272.6	17.8	36.3	917.3	666.4	361.0		
8200.0	269.7	17.7	34.8	914.7	666.3	362.0		
8300.0	266.8	17.6	33.3	912.2	666.2	363.0		
8400.0	263.9	17.5	31.8	909.6	666.1	364.0		
8500.0	261.0	17.4	30.3	907.1	666.0	365.0		
8600.0	258.1	17.3	28.8	904.5	665.9	366.0		
8700.0	255.2	17.2	27.3	902.0	665.8	367.0		
8800.0	252.3	17.1	25.8	899.4	665.7	368.0		
8900.0	249.4	17.0	24.3	896.9	665.6	369.0		
9000.0	246.5	16.9	22.8	894.3	665.5	370.0		
9100.0	243.6	16.8	21.3	891.8	665.4	371.0		
9200.0	240.7	16.7	19.8	889.2	665.3	372.0		
9300.0	237.8	16.6	18.3	886.7	665.2	373.0		
9400.0	234.9	16.5	16.8	884.1	665.1	374.0		
9500.0	232.0	16.4	15.3	881.6	665.0	375.0		
9600.0	229.1	16.3	13.8	879.0	664.9	376.0		
9700.0	226.2	16.2	12.3	876.5	664.8	377.0		
9800.0	223.3	16.1	10.8	873.9	664.7	378.0		
9900.0	220.4	16.0	9.3	871.4	664.6	379.0		
10000.0	217.5	15.9	7.8	868.8	664.5	380.0		

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
1907020337  
WHITE SANDS

TABLE 10 CONT

STATION ALTITUDE 3969.00 FEET MSL  
5 JULY 83 0823 MDT  
ASCENSION NO. 337

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CELSIUS	TEMPERATURE DEVIATION CENTIGRADE	REL-HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND METER	WIND DIRECTION DEGREES(TV)	WIND SPEED KNOTS	INDEX OF REFRACTION
7900.0	776.0	19.5	1.8	70.6	913.2	667.7	78.8	10.7	1.000234
8000.0	777.5	19.4	1.5	70.1	910.5	667.5	79.0	11.4	1.000233
8100.0	774.0	19.3	1.1	29.5	907.8	667.3	79.3	12.2	1.000232
8200.0	771.9	19.1	.7	29.0	905.1	667.1	78.8	12.5	1.000230
8300.0	759.2	19.0	.3	28.5	902.4	666.9	77.7	12.5	1.000229
8400.0	756.5	18.8	-.0	28.0	899.8	666.7	76.7	12.4	1.000228
8500.0	753.0	18.7	-.4	27.5	897.1	666.5	75.6	12.4	1.000225
8600.0	751.1	18.5	-.8	26.9	894.5	666.3	74.5	12.4	1.000225
8700.0	748.5	18.4	-1.2	26.4	891.8	666.1	73.4	12.4	1.000224
8800.0	745.8	18.2	-1.6	25.9	889.2	665.9	72.3	12.4	1.000222
8900.0	743.4	18.1	-2.0	25.4	886.5	665.7	71.2	12.4	1.000221
9000.0	742.5	17.9	-2.4	24.9	883.9	665.6	70.1	12.4	1.000220
9100.0	737.9	17.6	-2.8	24.3	881.3	665.4	69.8	12.5	1.000219
9200.0	735.3	17.6	-3.2	24.0	878.7	665.2	69.7	12.5	1.000217
9300.0	732.7	17.5	-3.4	23.8	876.2	664.9	69.6	12.6	1.000217
9400.0	730.1	17.3	-3.6	23.7	873.6	664.7	69.5	12.7	1.000216
9500.0	727.4	17.1	-3.9	23.5	871.1	664.5	69.4	12.8	1.000215
9600.0	724.6	16.9	-4.1	23.4	868.5	664.3	69.3	12.9	1.000214
9700.0	722.3	16.7	-4.4	23.2	866.0	664.0	69.2	13.0	1.000213
9800.0	719.7	16.5	-4.6	23.1	863.5	663.8	69.1	13.0	1.000212
9900.0	717.1	16.3	-4.8	23.0	861.0	663.6	69.0	13.1	1.000211
10000.0	714.5	16.2	-5.1	22.8	858.5	663.4	69.2	13.2	1.000210
10100.0	712.0	16.0	-5.3	22.7	856.0	663.2	69.9	13.3	1.000209
10200.0	709.4	15.8	-5.5	22.5	853.5	662.9	70.6	13.5	1.000209
10300.0	706.9	15.6	-5.8	22.4	851.0	662.7	71.2	13.6	1.000208
10400.0	704.4	15.4	-6.0	22.2	848.6	662.5	71.9	13.7	1.000207
10500.0	701.9	15.2	-6.3	22.1	846.1	662.3	72.5	13.8	1.000206
10600.0	699.2	15.0	-6.4	22.1	843.7	662.0	73.2	14.0	1.000205
10700.0	696.8	14.8	-6.4	22.5	841.3	661.7	73.8	14.1	1.000205
10800.0	694.3	14.5	-6.4	22.9	838.9	661.4	74.4	14.2	1.000204
10900.0	691.7	14.3	-6.4	23.3	836.7	661.1	75.0	14.4	1.000204
11000.0	689.4	14.0	-6.4	23.6	834.4	660.8	75.4	14.5	1.000203
11100.0	686.7	13.7	-6.4	24.0	832.1	660.5	75.8	14.7	1.000203
11200.0	684.2	13.5	-6.4	24.4	829.8	660.3	76.2	14.8	1.000202
11300.0	681.7	13.2	-6.5	24.8	827.5	660.0	76.5	15.0	1.000202
11400.0	679.2	13.0	-6.5	25.2	825.3	659.7	76.9	15.2	1.000201
11500.0	676.6	12.7	-6.5	25.6	823.0	659.4	77.2	15.3	1.000201
11600.0	674.3	12.4	-6.5	25.9	820.8	659.1	77.5	15.5	1.000200
11700.0	671.9	12.2	-6.6	26.3	818.5	658.8	77.9	15.6	1.000200
11800.0	669.4	11.9	-6.6	26.7	816.3	658.5	78.2	15.8	1.000199

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
1960070337  
WHITE SANDS

STATION ALTITUDE 3929.00 FEET MSL  
5 JULY 83 0823 MDT  
ASCENSION NO. 377

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
					BEFORE	AFTER			
11900.0	67.0	11.7	27.1	814.1	658.2		77.9	15.9	1.000199
12000.0	66.6	11.4	27.5	811.9	657.9		77.5	16.0	1.000198
12100.0	66.1	11.2	27.9	809.5	657.6		77.0	16.1	1.000196
12200.0	65.7	10.9	28.3	807.4	657.3		76.6	16.2	1.000197
12300.0	65.3	10.6	28.6	805.2	657.0		76.2	16.3	1.000197
12400.0	64.9	10.4	29.0	803.0	656.7		75.8	16.4	1.000196
12500.0	64.5	10.1	29.4	800.3	656.4		75.4	16.5	1.000196
12600.0	64.2	9.9	29.8	798.7	656.1		75.0	16.6	1.000195
12700.0	64.8	9.6	30.2	796.5	655.8		74.6	16.7	1.000195
12800.0	64.5	9.3	30.6	794.3	655.5		73.9	16.6	1.000194
12900.0	64.3	9.1	30.9	792.1	655.2		73.1	16.4	1.000193
13000.0	64.0	8.8	31.3	790.7	654.9		72.4	16.3	1.000193
13100.0	63.8	8.6	31.7	787.3	654.6		71.6	16.2	1.000192
13200.0	63.6	8.3	32.1	785.7	654.3		70.9	16.0	1.000192
13300.0	63.6	8.1	32.5	783.4	654.0		70.0	15.9	1.000191
13400.0	63.5	7.8	32.9	781.4	653.7		69.2	15.8	1.000191
13500.0	629.2	7.5	33.6	779.7	653.4		68.4	15.7	1.000190
13600.0	626.9	7.3	34.4	777.1	653.1		67.5	15.6	1.000190
13700.0	624.5	7.0	35.3	774.9	652.8		66.3	15.5	1.000190
13800.0	622.2	6.8	36.2	772.7	652.5		65.1	15.4	1.000189
13900.0	619.9	6.5	37.1	770.5	652.2		63.9	15.3	1.000189
14000.0	617.6	6.2	38.0	768.4	651.9		62.4	15.2	1.000189
14100.0	615.3	6.0	38.9	766.2	651.6		61.1	15.1	1.000188
14200.0	613.0	5.7	39.7	764.0	651.3		59.8	15.1	1.000183
14300.0	610.3	5.5	40.6	761.9	651.0		58.4	15.0	1.000188
14400.0	608.5	5.2	41.5	759.8	650.7		57.1	15.0	1.000187
14500.0	606.2	5.0	42.4	757.5	650.4		55.7	14.9	1.000187
14600.0	604.0	4.7	43.3	755.5	650.1		53.4	15.1	1.000186
14700.0	601.7	4.4	44.1	753.4	649.8		51.0	15.4	1.000186
14800.0	599.5	4.2	45.0	751.3	649.5		48.4	15.7	1.000186
14900.0	597.3	3.9	45.9	749.2	649.2		46.4	15.0	1.000185
15000.0	595.1	3.7	46.8	747.1	648.9		44.2	16.3	1.000185
15100.0	592.8	3.4	48.5	744.9	648.7		42.2	15.7	1.000185
15200.0	590.6	3.2	50.4	742.7	648.4		40.2	17.1	1.000185
15300.0	588.4	2.9	52.4	740.6	648.1		38.3	17.5	1.000185
15400.0	586.2	2.7	54.4	738.4	647.9		36.5	17.9	1.000185
15500.0	584.0	2.5	56.4	736.2	647.5		34.9	18.1	1.000185
15600.0	581.8	2.2	58.4	734.0	647.3		33.3	19.2	1.000184
15700.0	579.6	2.0	60.3	731.9	647.1		31.7	19.4	1.000184
15800.0	577.4	1.7	62.3	729.8	646.8		30.2	19.6	1.000184

STATION ALTITUDE 5959.00 FEET MSL  
5 JULY 83 0823 MDT  
ASCENSION NO. 337

UPPER AIR DATA  
180000Z  
UNITE CARDS

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEGREES	REL-HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TV)	SPEED KNOTS	INDEX OF REFRACTION
15000.0	575.3	1.5	-4.5	64.3	727.6	666.5	28.7	18.8	1.000184
16000.0	573.1	1.4	-4.4	56.4	725.6	666.2	27.2	19.1	1.000184
16100.0	570.9	.9	-4.2	55.5	727.7	665.9	25.8	19.3	1.000184
16200.0	568.6	.6	-4.1	70.8	741.7	665.5	24.4	19.6	1.000184
16300.0	566.6	.2	-4.0	73.0	719.8	665.1	23.3	19.7	1.000183
16400.0	564.5	-.1	-3.9	75.2	717.9	664.8	22.8	19.6	1.000183
16500.0	562.4	-.4	-3.8	77.4	716.0	664.4	22.3	19.5	1.000183
16600.0	560.2	-.7	-3.8	79.6	714.1	664.0	21.7	19.4	1.000183
16700.0	558.1	-1.0	-3.7	81.7	712.2	663.7	21.1	19.3	1.000182
16800.0	556.0	-1.3	-3.7	82.5	710.3	663.3	20.6	19.2	1.000182
16900.0	553.9	-1.5	-4.3	81.2	708.2	663.0	20.0	19.2	1.000181
17000.0	551.8	-1.8	-4.7	80.0	706.2	662.7	19.5	19.1	1.000179
17100.0	549.7	-2.0	-5.2	78.8	704.2	662.4	18.9	19.0	1.000178
17200.0	547.6	-2.2	-5.6	77.5	702.1	662.1	19.5	18.8	1.000177
17300.0	545.5	-2.5	-6.0	76.3	700.1	661.8	20.5	18.7	1.000175
17400.0	543.4	-2.7	-6.5	75.1	698.1	661.5	21.5	18.5	1.000175
17500.0	541.3	-2.7	-8.3	55.3	696.7	661.4	22.5	18.4	1.000172
17600.0	539.3	-2.7	-10.4	55.1	694.3	661.3	23.5	18.2	1.000169
17700.0	537.2	-2.7	-13.0	44.9	692.2	661.2	24.5	18.1	1.000166
17800.0	535.1	-2.7	-16.1	34.7	690.5	661.1	25.5	17.9	1.000162
17900.0	533.1	-2.5	-17.1	31.6	688.5	661.2	26.6	17.8	1.000161
18000.0	531.1	-2.4	-17.9	29.1	686.5	661.4	27.7	17.7	1.000160
18100.0	529.0	-2.2	-18.8	26.5	684.5	661.6	29.0	17.4	1.000159
18200.0	527.0	-2.0	-19.8	24.0	682.5	661.8	30.5	17.0	1.000157
18300.0	525.0	-2.2	-19.9	24.2	680.5	661.5	32.0	16.7	1.000157
18400.0	523.0	-2.5	-20.0	24.4	678.5	661.2	33.4	16.4	1.000156
18500.0	521.0	-2.7	-20.1	24.7	676.5	660.9	35.3	16.1	1.000156
18600.0	519.0	-3.0	-20.2	24.9	674.5	660.6	37.0	15.8	1.000155
18700.0	517.0	-3.2	-20.3	25.1	672.5	660.4	38.8	15.5	1.000155
18800.0	515.0	-3.4	-20.4	25.3	670.5	660.1	40.7	15.2	1.000154
18900.0	513.0	-3.7	-20.6	25.5	668.5	659.8	42.6	15.0	1.000154
19000.0	511.0	-3.9	-20.7	25.8	666.7	659.5	43.9	14.7	1.000153
19100.0	509.1	-4.2	-20.8	26.0	664.7	659.2	44.4	14.3	1.000153
19200.0	507.1	-4.4	-20.9	26.2	662.9	658.9	45.0	14.0	1.000152
19300.0	505.2	-4.7	-21.0	26.4	661.2	658.6	45.6	13.6	1.000152
19400.0	503.2	-4.9	-21.1	26.6	659.3	658.3	46.2	13.3	1.000151
19500.0	501.3	-5.1	-21.2	26.9	657.3	658.0	46.8	12.9	1.000151
19600.0	499.3	-5.4	-21.3	27.2	655.1	657.7	47.5	12.6	1.000150
19700.0	497.4	-5.7	-21.4	27.9	652.9	657.4	48.3	12.3	1.000150
19800.0	495.4	-5.9	-21.4	28.6	650.4	657.1	49.0	11.9	1.000150



STATION ALTITUDE 2009.00 FEET MSL  
5 JULY 83 0823 MNT  
ASCENSION NO. 337

UPPER AIR DATA  
195000Z37  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEPT CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
19000.0	422.5	-6.2	-21.2	28.2	447.5	636.8	48.7	1.000149
20000.0	401.6	-6.5	-21.1	30.0	441.5	535.4	46.7	1.000149
20100.0	409.0	-6.8	-21.1	31.7	439.8	635.1	44.5	1.000149
20200.0	407.7	-7.0	-21.1	31.4	437.9	635.8	42.4	1.000146
20300.0	405.8	-7.3	-21.1	32.1	436.1	635.5	40.2	1.000148
20400.0	403.9	-7.6	-21.1	32.8	434.3	635.1	37.8	1.000147
20500.0	402.0	-7.9	-21.1	33.5	432.4	634.8	35.4	1.000147
20600.0	400.1	-8.1	-21.1	34.2	430.6	634.5	32.9	1.000147
20700.0	408.5	-8.4	-21.1	34.9	428.8	634.2	30.4	1.000146
20800.0	406.4	-8.7	-21.1	35.6	427.1	633.8	27.5	1.000146
20900.0	404.5	-9.0	-21.2	36.2	425.2	633.5	24.4	1.000145
21000.0	402.7	-9.2	-21.2	37.0	423.4	633.2	21.5	1.000145
21100.0	400.8	-9.5	-21.2	37.7	421.6	632.8	18.6	1.000145
21200.0	409.0	-9.8	-21.3	38.4	419.8	632.5	15.9	1.000144
21300.0	407.1	-10.1	-21.3	39.1	418.0	632.2	13.7	1.000144
21400.0	405.3	-10.3	-21.4	39.8	416.2	631.8	10.9	1.000143
21500.0	403.5	-10.6	-21.4	40.5	414.5	631.5	8.5	1.000143
21600.0	401.7	-10.9	-21.5	41.2	412.7	631.2	6.3	1.000143
21700.0	400.9	-11.2	-21.5	41.9	410.9	630.9	5.0	1.000142
21800.0	408.1	-11.4	-21.6	42.6	409.2	630.5	5.2	1.000142
21900.0	406.3	-11.7	-21.7	43.3	407.4	630.2	5.4	1.000141
22000.0	404.5	-12.0	-21.7	44.0	405.7	629.9	5.6	1.000141
22100.0	402.7	-12.2	-21.9	44.0	403.7	629.6	5.8	1.000140
22200.0	400.9	-12.5	-22.0	44.0	401.7	629.4	6.1	1.000140
22300.0	409.1	-12.5	-22.2	43.9	399.7	629.2	6.3	1.000139
22400.0	407.3	-12.7	-22.9	41.9	397.7	629.0	6.5	1.000139
22500.0	405.5	-12.8	-23.6	39.9	395.7	628.8	6.7	1.000138
22600.0	403.8	-13.0	-24.3	37.9	393.8	628.5	7.1	1.000137
22700.0	402.0	-13.1	-25.0	35.8	391.8	628.4	9.4	1.000136
22800.0	400.2	-13.3	-25.8	33.8	389.8	628.2	11.7	1.000135
22900.0	408.5	-13.4	-26.6	31.8	387.8	628.0	14.1	1.000135
23000.0	406.7	-13.7	-27.4	29.3	386.0	627.7	16.6	1.000134
23100.0	405.0	-14.0	-28.1	29.0	384.4	627.4	19.0	1.000134
23200.0	403.3	-14.3	-28.8	27.8	382.7	627.0	21.5	1.000133
23300.0	401.5	-14.5	-29.5	26.6	381.0	626.5	24.0	1.000132
23400.0	409.8	-14.8	-30.3	25.4	379.4	626.3	26.5	1.000132
23500.0	408.1	-15.1	-31.0	24.1	377.7	625.9	29.0	1.000131
23600.0	406.4	-15.4	-31.8	23.0	376.0	625.6	31.8	1.000131
23700.0	404.7	-15.4	-32.0	22.5	374.7	625.6	34.7	1.000130
23800.0	402.9	-15.4	-32.2	22.0	373.4	625.6	37.6	1.000130

STATION ALTITUDE 2919.00 FEET MSL  
5 JULY 83 0823 MDT  
ASCENSION NO. 237

UPPER AIR DATA  
1500 UTC  
WHITE SANDS

TABLE 10 CONT

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.77033 LON DLG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	H2O HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
23500.0	471.2	-15.4	-32.4	21.5	59.1	625.6	40.4	17.5	1.000129
24000.0	419.6	-15.4	-32.7	21.1	58.9	625.6	43.2	17.7	1.000128
24100.0	417.9	-15.4	-32.9	20.6	60.6	625.6	45.9	17.9	1.000128
24200.0	416.2	-15.4	-33.1	20.1	60.3	625.6	48.5	18.1	1.000127
24300.0	414.5	-15.4	-33.4	19.7	60.1	625.6	51.0	18.4	1.000127
24400.0	412.9	-15.4	-33.6	19.2	59.8	625.6	53.5	18.6	1.000126
24500.0	411.2	-15.5	-33.8	19.1	59.9	625.4	55.4	18.9	1.000125
24600.0	409.5	-15.9	-33.9	19.2	59.2	625.1	56.7	19.2	1.000125
24700.0	407.9	-16.1	-34.1	19.4	59.5	624.7	59.0	19.5	1.000125
24800.0	406.2	-16.3	-34.2	19.5	59.0	624.4	59.2	19.8	1.000125
24900.0	404.6	-16.6	-34.4	19.6	58.9	624.1	60.4	19.1	1.000124
25000.0	403.0	-16.8	-34.5	19.8	57.5	623.8	61.5	19.4	1.000124
25100.0	401.3	-17.1	-34.7	19.9	54.9	623.5	62.4	19.7	1.000123
25200.0	399.7	-17.3	-34.8	20.0	54.2	623.2	63.7	17.1	1.000123
25300.0	398.1	-17.5	-35.0	20.0	54.7	622.9	64.7	17.4	1.000123
25400.0	396.4	-17.7	-35.2	19.9	54.3	622.7	65.4	17.7	1.000122
25500.0	394.8	-17.9	-35.4	19.9	53.9	622.4	65.8	17.8	1.000122
25600.0	393.2	-18.2	-35.6	19.9	53.7	622.2	66.0	17.8	1.000121
25700.0	391.6	-18.4	-35.8	19.9	53.2	621.9	66.2	17.9	1.000121
25800.0	390.0	-18.6	-35.9	19.8	53.5	621.7	66.4	17.9	1.000120
25900.0	388.4	-18.8	-36.1	19.8	53.7	621.4	66.6	18.0	1.000120
26000.0	386.8	-19.0	-36.3	19.8	53.0	621.2	66.8	18.0	1.000120
26100.0	385.2	-19.2	-36.5	19.7	52.8	620.9	67.0	18.1	1.000119
26200.0	383.6	-19.4	-36.7	19.7	52.5	620.7	67.2	18.1	1.000119
26300.0	382.0	-19.6	-36.9	19.7	52.4	620.4	67.4	18.2	1.000118
26400.0	380.5	-19.8	-37.1	19.7	52.1	620.2	67.6	18.2	1.000118
26500.0	378.9	-20.0	-37.3	19.6	52.1	619.9	67.8	18.3	1.000118
26600.0	377.4	-20.2	-37.4	19.6	519.4	619.7	68.0	18.4	1.000117
26700.0	375.8	-20.4	-37.6	19.6	517.9	619.4	68.2	18.5	1.000117
26800.0	374.3	-20.6	-37.8	19.5	517.1	619.2	68.4	18.5	1.000115
26900.0	372.7	-20.8	-38.0	19.5	516.4	618.9	68.6	18.6	1.000116
27000.0	371.2	-21.0	-38.2	19.5	517.3	618.7	68.8	18.7	1.000116
27100.0	369.7	-21.2	-38.4	19.5	511.1	618.4	69.0	18.8	1.000115
27200.0	368.2	-21.4	-38.6	19.4	507.4	618.2	69.2	18.8	1.000115
27300.0	366.7	-21.6	-38.8	19.4	507.7	617.9	69.4	18.9	1.000114
27400.0	365.1	-21.8	-38.9	19.4	504.0	617.7	69.0	18.9	1.000114
27500.0	363.6	-22.0	-39.1	19.4	504.4	617.4	68.4	18.8	1.000114
27600.0	362.0	-22.2	-39.3	19.3	507.7	617.2	68.2	18.8	1.000113
27700.0	360.7	-22.4	-39.5	19.3	501.1	616.9	67.9	18.7	1.000113
27800.0	359.2	-22.5	-39.7	19.3	499.4	616.7	67.4	18.7	1.000112

GEODETIC COORDINATES  
32.40343 LAT DEG  
106.37033 LONG DEG

UPPER AIR DATA  
15600Z0337  
WHITE SANDS

STATION ALTITUDE 2939.00 FEET MSL  
5 JULY 83 0823 EDT  
ASCENSION NO. 337

TABLE 10 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CELSIUS	TEMPERATURE OF WIND POINT CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF WIND KNOTS	DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
21500.0	357.7	-22.6	-19.9	19.2	497.3	615.4	67.0	18.7	1.000112
22000.0	356.2	-23.1	-20.1	19.2	496.1	616.2	56.5	18.6	1.000112
22500.0	354.8	-23.3	-20.2	19.2	494.5	615.9	66.2	18.6	1.000111
23000.0	353.3	-23.5	-20.4	19.2	492.9	615.7	65.8	18.6	1.000111
23500.0	351.9	-23.7	-20.6	19.1	491.2	615.4	65.3	18.5	1.000110
24000.0	350.4	-23.9	-20.8	19.1	489.6	615.1	64.9	18.3	1.000110
24500.0	349.0	-24.1	-21.0	19.1	488.0	614.9	64.5	18.1	1.000110
25000.0	347.6	-24.3	-21.2	19.0	486.4	614.6	64.0	18.0	1.000109
25500.0	346.1	-24.5	-21.4	19.0	484.8	614.4	63.6	17.8	1.000109
26000.0	344.7	-24.7	-21.6	19.0	483.2	614.1	63.1	17.6	1.000109
26500.0	343.2	-24.9	-21.7	19.1	481.7	613.9	62.7	17.4	1.000108
27000.0	341.8	-25.2	-21.9	19.1	480.1	613.5	62.2	17.2	1.000108
27500.0	340.3	-25.4	-22.1	19.2	478.5	613.2	61.7	17.0	1.000107
28000.0	338.9	-25.7	-22.3	19.3	477.0	612.9	61.2	16.9	1.000107
28500.0	337.5	-25.9	-22.4	19.3	475.4	612.6	60.8	16.7	1.000107
29000.0	336.0	-26.1	-22.5	19.4	473.9	612.3	61.0	16.8	1.000106
29500.0	334.6	-26.4	-22.8	19.4	472.3	612.0	61.2	16.8	1.000106
30000.0	333.2	-26.6	-23.0	19.5	470.8	611.7	61.4	16.8	1.000106
30500.0	331.8	-26.9	-23.1	19.6	469.3	611.4	61.5	16.9	1.000105
31000.0	330.4	-27.1	-23.3	19.6	467.7	611.1	61.8	16.9	1.000105
31500.0	329.0	-27.4	-23.5	19.7	466.2	610.8	62.0	17.0	1.000105
32000.0	327.6	-27.6	-23.7	19.7	464.7	610.5	62.2	17.0	1.000104
32500.0	326.2	-27.8	-23.8	19.8	463.2	610.2	62.4	17.0	1.000104
33000.0	324.8	-28.1	-24.0	19.9	461.7	609.9	62.6	17.1	1.000104
33500.0	323.5	-28.3	-24.2	19.9	460.2	609.6	62.8	17.0	1.000103
34000.0	322.1	-28.6	-24.4	20.0	458.7	609.3	62.9	16.8	1.000103
34500.0	320.7	-28.8	-24.6	20.0	457.2	609.0	63.0	16.7	1.000103
35000.0	319.4	-29.0	-24.7	20.1	455.7	608.7	63.1	16.5	1.000102
35500.0	318.0	-29.3	-24.9	20.2	454.2	608.4	63.3	16.3	1.000102
36000.0	316.7	-29.5	-25.1	20.2	452.8	608.1	63.4	16.1	1.000102
36500.0	315.3	-29.8	-25.3	20.3	451.3	607.8	63.5	16.0	1.000101
37000.0	314.0	-30.0	-25.5	20.4	449.8	607.5	63.7	15.8	1.000101
37500.0	312.7	-30.2	-25.6	20.4	448.4	607.2	63.9	15.6	1.000101
38000.0	311.3	-30.5	-25.8	20.5	446.9	606.9	64.0	15.4	1.000100
38500.0	310.0	-30.7	-26.0	20.5	445.5	606.6	64.5	15.3	1.000100
39000.0	308.7	-31.0	-26.2	20.6	444.0	606.3	65.3	15.2	1.000100
39500.0	307.4	-31.2	-26.4	20.7	442.6	606.0	66.1	15.1	1.000099
40000.0	306.1	-31.5	-26.5	20.7	441.2	605.7	66.9	14.9	1.000099
40500.0	304.8	-31.7	-26.7	20.8	439.7	605.4	67.7	14.8	1.000099
41000.0	303.5	-31.9	-26.9	20.8	438.3	605.1	68.5	14.7	1.000098

GEODETIC COORDINATES  
32.40343 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
JPO0070337  
40111 SAGUS

STATION ALTITUDE 5009.00 FEET MSL  
9 JULY 85 0823 HRT  
ASCENSION No. 377

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES(TV)	SPEED KNOTS	
31900.0	32.2	-32.2	-47.1	20.9	436.9	604.8	69.4	14.6	1.000098
32000.0	32.1	-32.4	-47.3	21.0	435.5	604.5	70.7	14.5	1.000098
32100.0	32.0	-32.7	-47.5	21.0	434.1	604.2	71.1	14.4	1.000097
32200.0	32.0	-32.9	-47.6	21.0	432.6	603.9	72.0	14.3	1.000097
32300.0	32.1	-33.1	-47.8	21.1	431.1	603.6	72.0	14.3	1.000097
32400.0	32.5	-33.4	-48.0	21.1	429.7	603.3	71.6	14.3	1.000095
32500.0	33.6	-33.6	-48.2	21.1	428.2	603.0	74.4	14.4	1.000096
32600.0	33.9	-33.9	-48.4	21.2	426.8	602.7	75.1	14.4	1.000096
32700.0	34.1	-34.1	-48.6	21.2	425.4	602.4	75.9	14.5	1.000095
32800.0	34.3	-34.3	-48.8	21.3	424.0	602.1	76.7	14.5	1.000095
32900.0	34.6	-34.6	-49.0	21.3	422.5	601.8	77.5	14.6	1.000095
33000.0	34.8	-34.8	-49.2	21.3	421.1	601.5	78.2	14.6	1.000094
33100.0	35.0	-35.0	-49.4	21.4	419.7	601.2	79.0	14.7	1.000094
33200.0	35.3	-35.3	-49.6	21.4	418.3	600.9	79.7	14.7	1.000094
33300.0	35.5	-35.5	-49.7	21.4	416.9	600.6	80.5	14.8	1.000093
33400.0	35.8	-35.8	-49.9	21.5	415.5	600.3	80.8	14.7	1.000093
33500.0	36.1	-36.1	-50.1	21.5	414.1	600.0	81.1	14.5	1.000093
33600.0	36.2	-36.2	-50.3	21.5	412.7	599.7	81.4	14.4	1.000092
33700.0	36.5	-36.5	-50.5	21.6	411.3	599.4	81.8	14.2	1.000092
33800.0	36.7	-36.7	-50.7	21.6	409.9	599.1	82.1	14.1	1.000092
33900.0	37.0	-37.0	-50.9	21.6	408.5	598.7	82.4	14.0	1.000091
34000.0	37.2	-37.2	-51.1	21.7	407.2	598.4	82.8	13.8	1.000091
34100.0	37.4	-37.4	-51.3	21.7	405.8	598.1	83.2	13.7	1.000091
34200.0	37.7	-37.7	-51.5	21.7	404.4	597.8	83.5	13.6	1.000090
34300.0	37.9	-37.9	-51.7	21.8	403.1	597.5	83.9	13.4	1.000090
34400.0	38.2	-38.2	-51.9	21.8	401.7	597.2	84.3	13.3	1.000090
34500.0	38.4	-38.4	-52.1	21.9	400.4	596.9	84.8	13.2	1.000090
34600.0	38.7	-38.7	-52.3	21.9	399.0	596.6	85.2	13.1	1.000089
34700.0	38.9	-38.9	-52.5	21.9	397.7	596.3	85.7	12.9	1.000089
34800.0	39.1	-39.1	-52.6	22.0	396.4	596.0	86.2	12.8	1.000089
34900.0	39.3	-39.3	-52.8	22.0	395.1	595.7	86.7	12.7	1.000088
35000.0	39.6	-39.6	-53.0	22.0	393.7	595.4	87.2	12.6	1.000088
35100.0	39.9	-39.9	-53.2	22.0	392.4	595.1	87.7	12.5	1.000088
35200.0	40.1	-40.1	-53.4	22.0	391.0	594.8	88.3	12.4	1.000087
35300.0	40.3	-40.3	-53.6	22.0	389.7	594.5	88.9	12.3	1.000087
35400.0	40.5	-40.5	-53.8	22.0	388.4	594.2	89.4	12.2	1.000087
35500.0	40.8	-40.8	-54.0	22.0	387.0	593.9	90.1	12.1	1.000085
35600.0	41.0	-41.0	-54.2	22.0	385.7	593.6	90.9	11.9	1.000086
35700.0	41.3	-41.3	-54.4	22.0	384.4	593.3	91.8	11.8	1.000085
35800.0	41.5	-41.5	-54.6	22.0	383.1	592.9	92.8	11.6	1.000085

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3949.00 FEET MSL  
5 JULY 65 0823 EDT  
ASCENSION NO. 377

UPPER AIR DATA  
1PC000337  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

# TABLE 10 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
35900.0	253.6	-41.7	5.4**	731.7	592.6	97.7	11.5	1.000085
36000.0	252.5	-42.0	5.7**	730.4	592.3	94.7	11.4	1.000085
36100.0	251.3	-42.2	6.0**	729.1	592.0	95.7	11.2	1.000084
36200.0	250.2	-42.5	6.3**	727.8	591.7	96.7	11.1	1.000084
36300.0	249.1	-42.7		726.5	591.4	97.7	11.0	1.000084
36400.0	248.0	-43.0		725.2	591.1	98.8	10.8	1.000084
36500.0	246.8	-43.2		724.0	590.7	99.9	10.7	1.000083
36600.0	245.7	-43.5		722.7	590.4	100.2	10.6	1.000083
36700.0	244.6	-43.7		721.4	590.1	100.2	10.4	1.000083
36800.0	243.5	-44.0		720.2	589.7	100.3	10.3	1.000082
36900.0	242.4	-44.3		718.9	589.4	100.4	10.2	1.000082
37000.0	241.3	-44.5		717.6	589.1	100.4	10.0	1.000082
37100.0	240.2	-44.8		716.4	588.7	100.5	9.9	1.000082
37200.0	239.1	-45.0		715.1	588.4	100.6	9.7	1.000081
37300.0	238.0	-45.3		713.7	588.1	100.7	9.6	1.000081
37400.0	236.9	-45.6		712.5	587.7	100.7	9.5	1.000081
37500.0	235.8	-45.8		711.4	587.4	100.8	9.3	1.000080
37600.0	234.8	-46.1		710.2	587.1	100.5	9.2	1.000080
37700.0	233.7	-46.3		709.0	586.7	100.0	9.2	1.000080
37800.0	232.6	-46.6		707.7	586.4	99.5	9.1	1.000080
37900.0	231.6	-46.9		706.5	586.0	99.0	9.0	1.000079
38000.0	230.5	-47.1		705.3	585.7	98.4	9.0	1.000079
38100.0	229.5	-47.4		704.1	585.4	98.1	8.9	1.000079
38200.0	228.5	-47.6		702.9	585.0	97.6	8.8	1.000079
38300.0	227.4	-47.9		701.7	584.7	97.0	8.8	1.000078
38400.0	226.4	-48.2		700.5	584.4	96.5	8.7	1.000078
38500.0	225.2	-48.4		699.3	584.0	96.0	8.7	1.000078
38600.0	224.3	-48.6		698.0	583.7	96.3	8.7	1.000078
38700.0	223.2	-48.9		696.7	583.5	96.7	8.8	1.000077
38800.0	222.2	-49.1		695.5	583.2	97.1	8.9	1.000077
38900.0	221.2	-49.3		694.2	582.9	97.4	9.0	1.000077
39000.0	220.1	-49.5		693.0	582.6	97.8	9.1	1.000076
39100.0	219.1	-49.8		691.7	582.3	98.1	9.1	1.000076
39200.0	218.1	-50.0		690.5	582.0	98.5	9.2	1.000076
39300.0	217.1	-50.2		689.2	581.7	98.9	9.3	1.000076
39400.0	216.1	-50.4		688.0	581.4	99.2	9.4	1.000075
39500.0	215.1	-50.7		686.7	581.1	99.5	9.5	1.000075
39600.0	214.1	-50.9		685.5	580.8	100.4	9.5	1.000075
39700.0	213.1	-51.1		684.3	580.5	100.0	9.6	1.000074
39800.0	212.1	-51.4		683.1	580.2	100.4	9.6	1.000074

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 5919.00 FEET MSL  
5 JULY 53 0823 MDT  
ASCENSION NO. 327

UPPER AIR DATA  
190000Z57  
WHITE SANDS

TABLE 10 CONT'D

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.17033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	4TH DATA DIRECTION DEGREES(TN)	INDEX OF REFRACTION
3900.0	211.1	-51.6		1.31.2	579.9	104.8	1.000074
4000.0	210.1	-51.6		1.30.7	579.6	106.1	1.000074
4100.0	209.1	-52.0		1.29.5	579.3	107.5	1.000073
4200.0	208.1	-52.3		1.28.3	579.0	108.8	1.000073
4300.0	207.2	-52.5		1.27.1	578.7	110.1	1.000073
4400.0	206.2	-52.7		1.25.9	578.4	111.3	1.000073
4500.0	205.3	-52.9		1.24.7	578.1	112.6	1.000072
4600.0	204.3	-53.2		1.23.5	577.8	113.9	1.000072
4700.0	203.3	-53.4		1.22.3	577.5	114.7	1.000072
4800.0	202.4	-53.6		1.21.2	577.2	115.5	1.000072
4900.0	201.5	-53.8		1.20.1	576.9	116.6	1.000071
5000.0	200.5	-54.1		1.18.8	576.6	117.5	1.000071
5100.0	199.6	-54.3		1.17.7	576.3	118.4	1.000071
5200.0	198.6	-54.5		1.16.4	575.1	119.6	1.000070
5300.0	197.7	-54.7		1.15.2	575.2	120.3	1.000070
5400.0	196.7	-54.8		1.13.9	575.6	121.2	1.000070
5500.0	195.8	-55.0		1.12.7	575.4	122.1	1.000070
5600.0	194.9	-55.2		1.11.5	575.1	123.0	1.000069
5700.0	193.9	-55.4		1.10.3	574.9	123.8	1.000069
5800.0	193.0	-55.6		1.09.1	574.6	124.2	1.000069
5900.0	192.1	-55.8		1.07.9	574.4	124.7	1.000069
6000.0	191.2	-55.9		1.06.6	574.2	125.1	1.000068
6100.0	190.3	-56.1		1.05.4	573.9	125.5	1.000068
6200.0	189.4	-56.3		1.04.3	573.7	125.9	1.000068
6300.0	188.5	-56.5		1.03.1	573.4	126.3	1.000068
6400.0	187.6	-56.7		1.01.9	573.2	126.6	1.000067
6500.0	186.7	-56.9		1.00.7	572.9	127.0	1.000067
6600.0	185.8	-57.0		0.99.5	572.7	127.3	1.000067
6700.0	184.9	-57.2		0.98.4	572.5	127.7	1.000066
6800.0	184.0	-57.4		0.97.2	572.2	128.2	1.000066
6900.0	183.1	-57.6		0.96.0	571.9	128.6	1.000066
7000.0	182.2	-57.8		0.94.8	571.7	129.0	1.000066
7100.0	181.4	-58.0		0.93.7	571.4	129.4	1.000066
7200.0	180.5	-58.2		0.92.5	571.2	129.8	1.000065
7300.0	179.6	-58.4		0.91.4	570.9	130.3	1.000065
7400.0	178.8	-58.6		0.90.2	570.7	130.7	1.000065
7500.0	177.9	-58.8		0.89.1	570.4	131.2	1.000064
7600.0	177.0	-59.1		0.88.0	570.2	131.6	1.000064
7700.0	176.2	-59.1		0.86.8	569.9	132.1	1.000064
7800.0	175.3	-59.3		0.85.7	569.7	132.5	1.000064

STATION ALTITUDE 3989.00 FEET MSL  
5 JULY 83  
ASCENSION NO. 337

UPPER AIR DATA  
120000Z337  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

# TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DTWPOINT CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND METER	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
43900.0	174.5	-59.5			256.5	369.4	146.4	15.8	1.000033
44000.0	173.7	-59.7			257.4	369.2	147.6	15.9	1.000063
44100.0	172.8	-59.9			258.3	368.9	148.0	15.9	1.000063
44200.0	172.0	-60.1			259.2	368.6	150.1	16.0	1.000063
44300.0	171.2	-60.3			260.1	368.4	151.7	16.1	1.000062
44400.0	170.3	-60.5			261.0	368.1	152.5	16.1	1.000062
44500.0	169.5	-60.7			261.9	367.9	153.7	16.2	1.000062
44600.0	168.7	-60.9			262.8	367.6	154.9	16.3	1.000062
44700.0	167.9	-61.1			263.8	367.3	156.1	16.4	1.000061
44800.0	167.0	-61.4			264.8	366.9	157.2	16.5	1.000061
44900.0	166.2	-61.7			265.8	366.5	158.4	16.6	1.000061
45000.0	165.4	-62.0			266.8	366.1	159.6	16.6	1.000061
45100.0	164.6	-62.2			267.8	365.8	160.8	16.5	1.000061
45200.0	163.8	-62.5			268.8	365.4	162.0	16.4	1.000060
45300.0	163.0	-62.8			269.8	365.0	163.2	16.2	1.000060
45400.0	162.2	-63.1			270.8	364.6	164.4	16.1	1.000060
45500.0	161.4	-63.4			271.8	364.2	165.6	16.0	1.000060
45600.0	160.6	-63.7			272.8	363.9	166.8	15.9	1.000059
45700.0	159.8	-63.9			273.8	363.5	168.0	15.8	1.000059
45800.0	159.0	-64.2			274.8	363.1	169.2	15.7	1.000059
45900.0	158.2	-64.5			275.8	362.7	170.4	15.6	1.000059
46000.0	157.4	-64.8			276.8	362.3	171.6	15.5	1.000059
46100.0	156.7	-65.1			277.8	361.9	172.8	15.4	1.000058
46200.0	155.9	-65.4			278.8	361.5	174.0	15.3	1.000058
46300.0	155.1	-65.6			279.8	361.1	175.2	15.2	1.000058
46400.0	154.3	-65.7			280.8	360.7	176.4	15.1	1.000058
46500.0	153.6	-65.8			281.8	360.3	177.6	15.1	1.000057
46600.0	152.8	-65.9			282.8	359.9	178.8	15.0	1.000057
46700.0	152.0	-66.1			283.8	359.5	180.0	15.0	1.000057
46800.0	151.3	-66.2			284.8	359.1	181.2	14.9	1.000057
46900.0	150.5	-66.3			285.8	358.7	182.4	14.9	1.000056
47000.0	149.8	-66.5			286.8	358.3	183.6	14.8	1.000056
47100.0	149.0	-66.6			287.8	357.9	184.8	14.8	1.000055
47200.0	148.3	-66.8			288.8	357.5	186.0	14.6	1.000055
47300.0	147.5	-67.0			289.8	357.1	187.2	14.5	1.000055
47400.0	146.8	-67.1			290.8	356.7	188.4	14.4	1.000055
47500.0	146.0	-67.3			291.8	356.3	189.6	14.3	1.000055
47600.0	145.3	-67.5			292.8	355.9	190.8	14.2	1.000055
47700.0	144.5	-67.7			293.8	355.5	192.0	14.1	1.000055
47800.0	143.8	-67.8			294.8	355.1	193.2	14.0	1.000054

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
1800Z 20737  
WHITE SANDS

STATION ALTITUDE 5089.00 FEET MSL  
5 JULY 85 0823 MDT

ASCENSION NO. 377

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DWP POINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES (TN)	SPEED KNOTS	
47500.0	143.1	-68.0			243.0	558.0	127.1	13.9	1.000054
48000.0	142.4	-68.2			242.0	557.8	126.0	13.9	1.000054
48100.0	141.7	-68.4			241.0	557.5	125.1	13.9	1.000054
48200.0	141.0	-68.5			240.0	557.3	124.4	14.0	1.000053
48300.0	140.2	-68.7			239.0	557.0	123.7	14.1	1.000053
48400.0	139.5	-68.9			237.9	556.8	123.0	14.3	1.000053
48500.0	138.8	-69.0			236.9	556.6	122.3	14.4	1.000053
48600.0	138.1	-69.2			236.0	556.3	121.6	14.5	1.000053
48700.0	137.4	-69.4			235.0	556.1	121.0	14.7	1.000052
48800.0	136.7	-69.6			234.0	555.9	120.4	14.8	1.000052
48900.0	136.0	-69.7			233.0	555.6	119.7	15.0	1.000052
49000.0	135.4	-69.9			232.0	555.4	119.1	15.1	1.000052
49100.0	134.7	-70.1			231.0	555.2	118.7	15.2	1.000051
49200.0	134.0	-70.3			230.1	554.9	120.9	14.6	1.000051
49300.0	133.3	-70.4			229.1	554.7	123.3	14.0	1.000051
49400.0	132.6	-70.6			228.1	554.4	125.9	13.4	1.000051
49500.0	132.0	-70.8			227.2	554.2	128.7	12.9	1.000051
49600.0	131.3	-70.8			226.1	554.1	131.8	12.4	1.000050
49700.0	130.6	-70.7			224.9	554.4	135.1	12.0	1.000050
49800.0	130.0	-70.5			223.4	554.6	138.6	11.6	1.000050
49900.0	129.3	-70.3			222.1	554.9	142.4	11.2	1.000049
50000.0	128.7	-70.1			220.8	555.1	146.4	10.9	1.000049
50100.0	128.0	-69.9			219.4	555.3	150.6	10.6	1.000049
50200.0	127.3	-69.6			218.1	555.6	155.4	9.9	1.000049
50300.0	126.7	-69.6			216.8	555.8	161.4	9.9	1.000048
50400.0	126.1	-69.5			215.7	555.9	168.0	9.1	1.000048
50500.0	125.4	-69.6			214.7	555.8	177.8	7.4	1.000048
50600.0	124.8	-69.7			213.7	555.7	188.3	6.0	1.000048
50700.0	124.1	-69.8			212.7	555.5	190.9	6.7	1.000047
50800.0	123.5	-69.9			211.7	555.4	211.8	6.7	1.000047
50900.0	122.9	-70.0			210.7	555.3	223.7	7.1	1.000047
51000.0	122.3	-70.1			209.7	555.2	232.9	7.7	1.000047
51100.0	121.6	-70.2			208.7	555.1	241.1	8.4	1.000046
51200.0	121.0	-70.2			207.8	554.9	247.8	9.1	1.000045
51300.0	120.4	-70.3			206.8	554.8	253.8	8.7	1.000046
51400.0	119.8	-70.4			205.8	554.7	260.2	8.5	1.000045
51500.0	119.2	-70.5			204.9	554.6	267.1	8.3	1.000046
51600.0	118.6	-70.6			203.9	554.5	274.1	8.2	1.000045
51700.0	118.0	-70.7			202.9	554.3	281.1	8.3	1.000045
51800.0	117.4	-70.8			202.0	554.2	287.8	8.5	1.000045



GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
180100Z37  
WHITE SANDS

STATION ALTITUDE 50-2-00 FEET MSL  
5 JULY 43 0823 MDT  
ASCENSION NO. 37

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
51900.0	116.6	-70.7		201.1	554.1	294.2	9.6	1.000045
52000.0	116.2	-70.7		199.9	554.3	300.1	9.2	1.000045
52100.0	115.6	-70.3		198.5	554.9	305.4	9.7	1.000044
52200.0	115.0	-69.9		197.1	555.4	310.2	10.2	1.000044
52300.0	114.4	-69.5		195.7	556.0	312.3	10.3	1.000044
52400.0	113.9	-69.1		194.3	556.6	313.3	10.1	1.000043
52500.0	113.3	-68.7		193.0	557.1	314.3	9.8	1.000043
52600.0	112.7	-68.3		191.6	557.7	315.5	9.5	1.000043
52700.0	112.1	-67.9		190.3	558.2	316.7	9.3	1.000042
52800.0	111.6	-67.4		189.0	558.8	317.9	9.0	1.000042
52900.0	111.0	-67.0		187.6	559.3	319.2	8.8	1.000042
53000.0	110.4	-66.6		186.3	559.9	320.4	8.6	1.000041
53100.0	109.9	-66.2		185.0	560.4	321.7	8.3	1.000041
53200.0	109.3	-65.8		183.7	560.9	322.9	8.1	1.000041
53300.0	108.8	-65.4		182.4	561.4	324.1	7.8	1.000041
53400.0	108.2	-65.0		181.1	561.9	325.3	7.5	1.000041
53500.0	107.7	-64.6		179.8	562.4	326.5	7.2	1.000041
53600.0	107.1	-64.2		178.5	562.9	327.7	6.8	1.000040
53700.0	106.6	-63.8		177.2	563.4	328.9	6.5	1.000040
53800.0	106.1	-63.4		175.9	563.9	330.1	6.1	1.000040
53900.0	105.6	-63.0		174.6	564.4	331.3	5.8	1.000040
54000.0	105.0	-62.6		173.3	564.9	332.5	5.5	1.000040
54100.0	104.5	-62.2		172.0	565.4	333.7	5.1	1.000040
54200.0	104.0	-61.8		170.7	565.9	334.9	4.8	1.000039
54300.0	103.4	-61.4		169.4	566.4	336.1	4.5	1.000039
54400.0	102.9	-61.0		168.1	566.9	337.3	4.3	1.000039
54500.0	102.4	-60.6		166.8	567.4	338.5	4.2	1.000039
54600.0	101.9	-60.2		165.5	567.9	339.7	4.2	1.000038
54700.0	101.4	-59.8		164.2	568.4	340.9	4.3	1.000038
54800.0	100.9	-59.4		162.9	568.9	342.1	4.5	1.000038
54900.0	100.4	-59.0		161.6	569.4	343.3	4.5	1.000038
55000.0	99.9	-58.6		160.3	569.9	344.5	4.7	1.000038
55100.0	99.4	-58.2		159.0	570.4	345.7	4.7	1.000037
55200.0	98.9	-57.8		157.7	570.9	346.9	4.9	1.000037
55300.0	98.4	-57.4		156.4	571.4	348.1	5.2	1.000037
55400.0	97.9	-57.0		155.1	571.9	349.3	5.4	1.000037
55500.0	97.4	-56.6		153.8	572.4	350.5	5.4	1.000037
55600.0	96.9	-56.2		152.5	572.9	351.7	5.5	1.000037
55700.0	96.4	-55.8		151.2	573.4	352.9	5.5	1.000036
55800.0	96.0	-55.4		150.0	573.9	354.1	5.6	1.000036

UPPER AIR DATA  
18/07/57  
WHITE SANDS

STATION ALTITUDE 2020 FEET MSL  
5 JULY 53  
ASCENSION NO. 57

GEOMETRIC COORDINATES  
32.40043 LAT DEG  
106.27033 LON DEG

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> AT 1000 FT	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
5500.0	75.5	-60.9		161.3	559.4	20.0	5.7	1.000035
5600.0	75.0	-60.0		160.4	559.6	23.1	5.7	1.000035
5700.0	74.5	-60.5		159.6	559.7	25.2	5.8	1.000035
5800.0	74.1	-60.7		158.7	559.8	27.3	5.9	1.000035
5900.0	73.6	-60.6		157.8	559.9	29.2	6.1	1.000035
6000.0	73.1	-60.5		157.0	560.1	31.1	6.2	1.000035
6100.0	72.7	-60.4		156.1	560.2	34.6	6.2	1.000035
6200.0	72.2	-60.3		155.3	560.3	38.1	6.3	1.000035
6300.0	71.5	-60.2		154.4	560.4	41.6	6.3	1.000035
6400.0	71.3	-60.1		153.6	560.6	45.0	6.5	1.000035
6500.0	70.5	-60.0		152.9	560.7	48.2	6.6	1.000035
6600.0	70.4	-60.5		151.9	560.8	51.3	6.7	1.000035
6700.0	69.9	-60.8		151.1	561.0	54.7	6.9	1.000035
6800.0	69.5	-60.7		150.3	561.1	57.1	7.1	1.000035
6900.0	69.0	-60.6		149.5	561.2	59.8	7.3	1.000035
7000.0	68.6	-60.5		148.7	561.3	62.3	7.5	1.000035
7100.0	68.2	-60.4		147.9	561.5	62.3	7.9	1.000035
7200.0	67.7	-60.4		147.1	561.6	61.6	8.3	1.000035
7300.0	67.3	-60.3		146.3	561.7	61.1	8.7	1.000035
7400.0	66.9	-60.2		145.5	561.8	60.6	9.1	1.000035
7500.0	66.4	-60.1		144.7	562.0	60.1	9.6	1.000035
7600.0	66.0	-60.0		143.9	562.1	59.7	10.0	1.000035
7700.0	65.6	-60.0		143.1	562.2	59.3	10.4	1.000035
7800.0	65.1	-60.0		142.4	562.3	59.0	10.8	1.000035
7900.0	64.7	-60.0		141.6	562.5	58.7	11.3	1.000035
8000.0	64.3	-60.0		140.8	562.6	58.3	11.7	1.000035
8100.0	63.9	-60.0		140.1	562.7	58.6	11.9	1.000035
8200.0	63.5	-60.0		139.3	562.8	58.6	11.9	1.000035
8300.0	63.0	-60.0		138.5	563.0	58.8	11.9	1.000035
8400.0	62.6	-60.0		137.7	563.1	59.0	11.9	1.000035
8500.0	62.2	-60.0		137.0	563.2	59.2	11.9	1.000035
8600.0	61.8	-60.0		136.2	563.3	59.4	11.9	1.000035
8700.0	61.4	-60.0		135.5	563.5	59.7	11.9	1.000035
8800.0	61.0	-60.0		134.8	563.6	59.9	11.9	1.000035
8900.0	60.6	-60.0		134.1	563.7	60.1	11.9	1.000035
9000.0	60.2	-60.0		133.4	563.8	60.3	11.9	1.000035
9100.0	59.8	-60.0		132.7	564.0	62.2	12.0	1.000035
9200.0	59.4	-60.0		131.9	564.1	65.4	12.2	1.000035
9300.0	59.0	-60.0		131.2	564.2	68.9	12.5	1.000035
9400.0	58.6	-60.0		130.5	564.3	72.1	12.8	1.000035

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
1F00070357  
WHITE SANDS

TABLE 10 CONT

STATION ALTITUDE 3049.00 FEET MSL  
5 JULY 35 0823 MDT  
ASCENSION NO. 277

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE WET-BULB DEGREES	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TV)	SPEED KNOTS	INDEX OF REFRACTION
5900.0	75.4	-63.3			12.9	564.4	75.1	13.1	1.000029
6000.0	77.9	-63.2			12.2	564.4	77.0	13.5	1.000029
6100.0	77.5	-63.2			12.5	564.5	80.5	13.9	1.000029
6200.0	77.1	-63.1			12.9	564.6	83.1	14.4	1.000028
6300.0	76.7	-63.1			12.2	564.6	85.4	14.8	1.000028
6400.0	76.3	-63.0			12.5	564.7	87.6	15.3	1.000028
6500.0	75.0	-63.0			12.9	564.8	89.7	15.0	1.000028
6600.0	75.0	-62.9			12.5	564.9	90.5	16.1	1.000028
6700.0	75.2	-62.9			12.5	564.9	91.3	16.3	1.000028
6800.0	74.9	-62.8			12.4	565.0	92.1	16.6	1.000028
6900.0	74.5	-62.8			12.3	565.1	92.8	16.8	1.000027
7000.0	74.1	-62.7			12.2	565.1	93.5	17.1	1.000027
7100.0	73.8	-62.7			12.1	565.2	94.2	17.3	1.000027
7200.0	73.4	-62.6			12.1	565.3	94.8	17.6	1.000027
7300.0	73.0	-62.6			12.0	565.4	95.5	17.8	1.000027
7400.0	72.7	-62.5			12.0	565.4	96.1	18.1	1.000027
7500.0	72.3	-62.5			11.9	565.5	96.7	18.4	1.000027
7600.0	72.0	-62.4			11.9	565.6	97.3	18.5	1.000025
7700.0	71.6	-62.3			11.8	565.6	98.1	18.4	1.000025
7800.0	71.3	-62.3			11.7	565.7	98.9	18.2	1.000025
7900.0	70.9	-62.2			11.7	565.8	99.7	18.0	1.000026
8000.0	70.6	-62.2			11.6	565.8	100.5	17.0	1.000026
8100.0	70.2	-62.1			11.5	565.9	101.7	17.7	1.000026
8200.0	69.9	-62.1			11.5	566.0	102.7	17.5	1.000026
8300.0	69.5	-61.9			11.4	566.0	103.0	17.4	1.000026
8400.0	69.2	-61.8			11.4	566.3	103.9	17.2	1.000025
8500.0	68.9	-61.7			11.3	566.5	104.8	17.1	1.000025
8600.0	68.5	-61.6			11.2	566.7	105.7	17.0	1.000025
8700.0	68.2	-61.4			11.2	566.8	106.3	16.7	1.000025
8800.0	67.9	-61.3			11.1	567.0	106.7	16.2	1.000025
8900.0	67.6	-61.2			11.1	567.2	106.3	15.6	1.000025
9000.0	67.2	-61.1			11.0	567.3	106.4	15.1	1.000025
9100.0	66.9	-61.0			10.9	567.5	106.4	14.6	1.000024
9200.0	66.6	-60.8			10.7	567.6	106.4	14.1	1.000024
9300.0	66.3	-60.7			10.7	567.8	106.5	13.6	1.000024
9400.0	65.9	-60.6			10.5	568.0	106.5	13.0	1.000024
9500.0	65.6	-60.5			10.4	568.1	106.5	12.5	1.000024
9600.0	65.3	-60.4			10.4	568.3	106.6	12.0	1.000024
9700.0	65.0	-60.2			10.3	568.5	106.6	11.5	1.000024
9800.0	64.7	-60.1			10.2	568.6	106.8	11.1	1.000024

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
100000337  
WHITE SANDS  
TABLE 10 CONT

STATION ALTITUDE 3209.00 FEET MSL  
5 JULY 83 0823 EDT  
ASCENSION NO. 377

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEPT POINT CENTIGRADE	REL-HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TV) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
6500.0	64.4	-60.0			105.2	568.3	100.5	10.8	1.000023
6400.0	64.1	-59.9			104.6	568.9	96.0	10.7	1.000023
6300.0	63.8	-59.7			104.1	569.1	91.4	10.6	1.000023
6200.0	63.4	-59.6			103.5	569.3	86.7	10.5	1.000023
6100.0	63.1	-59.5			103.0	569.4	82.1	10.6	1.000023
6000.0	62.8	-59.4			102.4	569.6	77.5	10.7	1.000023
5900.0	62.5	-59.3			101.9	569.8	73.0	10.9	1.000023
5800.0	62.2	-59.1			101.3	569.9	68.7	11.1	1.000023
5700.0	61.9	-59.0			100.8	570.1	64.6	11.4	1.000022
5600.0	61.6	-58.9			100.2	570.2	60.7	11.7	1.000022
5500.0	61.3	-58.8			99.7	570.4	57.1	12.2	1.000022
5400.0	61.0	-58.7			99.1	570.6	53.0	12.5	1.000022
5300.0	60.8	-58.5			98.6	570.7	57.1	12.9	1.000022
5200.0	60.5	-58.4			98.1	570.9	57.1	13.3	1.000022
5100.0	60.2	-58.3			97.6	571.0	57.1	13.7	1.000022
5000.0	60.0	-58.2			97.0	571.2	57.1	14.1	1.000022
4900.0	59.6	-58.0			96.5	571.4	57.1	14.5	1.000021
4800.0	59.3	-57.9			96.0	571.5	57.2	14.9	1.000021
4700.0	59.0	-57.8			95.5	571.7	57.2	15.3	1.000021
4600.0	58.7	-57.7			95.0	571.9	57.2	15.7	1.000021
4500.0	58.5	-57.6			94.4	572.0	57.2	16.1	1.000021
4400.0	58.2	-57.4			93.8	572.2	57.2	16.5	1.000021
4300.0	57.9	-57.3			93.4	572.3	57.7	16.7	1.000021
4200.0	57.6	-57.2			92.9	572.5	59.2	16.6	1.000021
4100.0	57.3	-57.1			92.4	572.7	60.7	16.6	1.000021
4000.0	57.1	-57.0			91.9	572.8	62.2	16.5	1.000020
3900.0	56.8	-56.8			91.4	573.0	63.8	16.4	1.000020
3800.0	56.5	-56.7			91.0	573.1	65.3	16.4	1.000020
3700.0	56.2	-56.6			90.5	573.3	66.8	16.4	1.000020
3600.0	56.0	-56.5			90.0	573.5	68.4	16.4	1.000020
3500.0	55.7	-56.3			89.5	573.6	69.9	16.4	1.000020
3400.0	55.4	-56.2			89.0	573.8	71.5	16.4	1.000020
3300.0	55.2	-56.1			88.5	573.9	73.0	16.4	1.000020
3200.0	54.9	-56.0			88.1	574.1	74.6	16.5	1.000020
3100.0	54.6	-55.9			87.6	574.3	76.2	16.6	1.000020
3000.0	54.4	-55.8			87.2	574.5	77.7	16.9	1.000019
2900.0	54.1	-56.0			86.8	574.7	79.3	17.1	1.000019
2800.0	53.9	-56.1			86.4	574.9	80.9	17.4	1.000019
2700.0	53.6	-56.2			86.1	575.1	82.5	17.6	1.000019
2600.0	53.3	-56.3			85.7	575.3	83.6	17.9	1.000019

STATION ALTITUDE 32,400 FEET MSL  
5 JULY 85 0823 EDT  
ASCENSION NO. 337

UPPER AIR DATA  
180000Z85  
WHITE SANDS

GEODETIC COORDINATES  
32.4004° LAT DEG  
106.3733° LON DEG

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
67900.0	53.1	-56.4		55.3	573.6	84.9	18.2	1.000019
68000.0	54.6	-56.5		55.0	573.4	86.3	18.5	1.000019
68100.0	56.0	-56.6		54.6	573.3	87.5	18.8	1.000019
68200.0	57.3	-56.7		54.2	573.2	88.7	19.1	1.000019
68300.0	58.1	-56.8		53.9	573.0	89.9	19.4	1.000019
68400.0	59.3	-56.9		53.5	572.9	91.1	19.8	1.000019
68500.0	61.6	-57.0		53.1	572.7	91.6	19.9	1.000019
68600.0	64.3	-57.1		52.8	572.6	92.1	20.0	1.000018
68700.0	67.1	-57.2		52.4	572.5	92.5	20.0	1.000018
68800.0	70.9	-57.3		52.1	572.3	92.9	20.1	1.000018
68900.0	75.6	-57.4		51.7	572.2	93.4	20.2	1.000018
69000.0	80.4	-57.5		51.4	572.0	93.8	20.3	1.000018
69100.0	85.1	-57.6		51.0	571.9	94.2	20.4	1.000018
69200.0	89.9	-57.6		50.6	571.9	94.6	20.5	1.000018
69300.0	94.7	-57.5		50.2	572.1	95.0	20.5	1.000018
69400.0	99.4	-57.3		49.9	572.3	95.4	20.6	1.000018
69500.0	104.2	-57.2		49.7	572.5	95.9	20.7	1.000018
69600.0	109.0	-57.1		49.5	572.7	96.7	20.8	1.000018
69700.0	113.7	-56.9		49.5	572.9	95.9	20.8	1.000017
69800.0	118.5	-56.8		49.1	573.1	95.4	20.7	1.000017
69900.0	123.3	-56.6		48.5	573.3	94.8	20.7	1.000017
70000.0	128.0	-56.5		47.2	573.5	94.3	20.6	1.000017
70100.0	132.8	-56.3		46.8	573.7	93.8	20.6	1.000017
70200.0	137.6	-56.2		46.4	573.9	93.2	20.6	1.000017
70300.0	142.4	-56.0		45.7	574.0	92.7	20.5	1.000017
70400.0	147.1	-55.9		45.6	574.2	92.1	20.5	1.000017
70500.0	151.9	-55.7		45.2	574.4	91.6	20.4	1.000017
70600.0	156.7	-55.6		44.7	574.6	91.1	20.4	1.000017
70700.0	161.5	-55.4		44.3	574.8	90.5	20.3	1.000017
70800.0	166.2	-55.3		43.9	575.0	90.0	20.3	1.000016
70900.0	171.0	-55.2		43.5	575.2	89.3	20.3	1.000016
71000.0	175.8	-55.0		43.1	575.4	88.5	20.4	1.000015
71100.0	180.6	-54.9		42.8	575.6	87.7	20.4	1.000015
71200.0	185.4	-54.7		42.4	575.8	86.9	20.5	1.000016
71300.0	190.2	-54.6		42.0	576.0	85.1	20.5	1.000016
71400.0	195.0	-54.4		41.6	576.2	85.7	20.6	1.000016
71500.0	200.0	-54.3		41.2	576.4	84.5	20.7	1.000016
71600.0	204.5	-54.1		40.9	576.6	83.7	20.8	1.000016
71700.0	209.3	-54.0		40.4	575.7	82.9	20.9	1.000016
71800.0	214.1	-53.8		40.0	575.9	82.1	21.0	1.000016

GEOMETRIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
190000337  
WHITE SANDS

TABLE 10 CONT

STATION ALTITUDE 3249.00 FEET MSL  
5 JULY 83 0823 EDT  
ASCENSION NO. 337

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND M/SEC	WIND DIRECTION DEGREES (TV)	WIND SPEED KNOTS	INDEX OF REFRACTION
71900.0	43.9	-53.7		0.7	577.1	81.4	21.1	1.000010
71600.0	43.7	-53.7		0.7	577.1	80.6	21.2	1.000015
71300.0	43.5	-53.7		0.7	577.2	79.9	21.3	1.000015
71000.0	43.3	-53.6		0.7	577.2	79.5	21.2	1.000015
70700.0	43.1	-53.6		0.7	577.2	79.3	21.1	1.000015
70400.0	42.9	-53.6		0.7	577.3	79.1	21.0	1.000015
70100.0	42.7	-53.6		0.7	577.3	78.9	20.9	1.000015
69800.0	42.5	-53.5		0.7	577.3	78.7	20.8	1.000015
69500.0	42.3	-53.5		0.7	577.4	78.5	20.7	1.000015
69200.0	42.1	-53.5		0.7	577.4	78.3	20.6	1.000015
68900.0	41.9	-53.5		0.7	577.4	78.1	20.5	1.000015
68600.0	41.7	-53.5		0.7	577.4	77.9	20.4	1.000015
68300.0	41.5	-53.4		0.7	577.5	77.7	20.2	1.000015
68000.0	41.3	-53.4		0.7	577.5	77.5	20.1	1.000015
67700.0	41.1	-53.4		0.7	577.5	77.3	20.0	1.000014
67400.0	40.9	-53.4		0.7	577.6	77.1	19.9	1.000014
67100.0	40.7	-53.3		0.7	577.6	77.3	19.6	1.000014
66800.0	40.5	-53.3		0.7	577.6	77.5	19.2	1.000014
66500.0	40.3	-53.3		0.7	577.6	77.8	18.8	1.000014
66200.0	40.1	-53.3		0.7	577.7	78.0	18.5	1.000014
65900.0	40.0	-53.3		0.7	577.7	78.7	18.1	1.000014
65600.0	39.8	-53.2		0.7	577.7	78.5	17.7	1.000014
65300.0	39.6	-53.2		0.7	577.8	79.8	17.4	1.000014
65000.0	39.4	-53.2		0.7	577.8	79.1	17.0	1.000014
64700.0	39.2	-53.2		0.7	577.8	79.4	16.6	1.000014
64400.0	39.0	-53.1		0.7	577.8	79.7	16.3	1.000014
64100.0	38.9	-53.1		0.7	577.9	80.1	15.9	1.000014
63800.0	38.7	-53.1		0.7	577.9	80.4	15.6	1.000014
63500.0	38.5	-53.1		0.7	577.9	80.2	15.7	1.000014
63200.0	38.3	-53.1		0.7	578.0	78.9	15.2	1.000014
62900.0	38.1	-53.0		0.7	578.0	77.6	15.1	1.000013
62600.0	38.0	-53.0		0.7	578.0	76.2	15.0	1.000013
62300.0	37.8	-53.0		0.7	578.0	74.8	14.9	1.000013
62000.0	37.6	-53.0		0.7	578.1	73.3	14.5	1.000013
61700.0	37.4	-52.9		0.7	578.1	72.1	14.8	1.000013
61400.0	37.2	-52.9		0.7	578.1	70.6	14.7	1.000013
61100.0	37.1	-52.9		0.7	578.2	69.2	14.7	1.000013
60800.0	36.9	-52.9		0.7	578.2	67.8	14.7	1.000013
60500.0	36.7	-52.9		0.7	578.2	66.4	14.6	1.000013
60200.0	36.6	-52.8		0.7	578.3	65.0	14.6	1.000013

GEODETIC COORDINATES  
32.40047 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
1000000137  
WHITE SANDS

STATION ALTITUDE 3039.00 FEET MSL  
5 JULY 83 0823 MDT  
ASCENSION NO. 337

TABLE 10 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TV)	INDEX OF REFRACTION
75900.0	16.4	-52.8		57.5	578.3	07.5	1.000013
76000.0	16.2	-52.8		57.3	578.3	07.5	1.000013
76100.0	16.0	-52.8		57.0	578.3	62.5	1.000013
76200.0	15.9	-52.7		56.7	578.4	67.0	1.000013
76300.0	15.7	-52.7		56.4	578.4	63.4	1.000013
76400.0	15.5	-52.7		56.2	578.4	67.8	1.000013
76500.0	15.4	-52.7		55.9	578.5	64.1	1.000012
76600.0	15.2	-52.7		55.4	578.5	64.5	1.000012
76700.0	15.0	-52.6		55.4	578.5	64.8	1.000012
76800.0	14.9	-52.6		55.1	578.5	65.1	1.000012
76900.0	14.7	-52.6		54.8	578.6	65.4	1.000012
77000.0	14.6	-52.6		54.6	578.6	65.7	1.000012
77100.0	14.4	-52.5		54.3	578.6	65.0	1.000012
77200.0	14.2	-52.5		54.1	578.7	66.2	1.000012
77300.0	14.1	-52.5		53.8	578.7	66.4	1.000012
77400.0	13.9	-52.5		53.5	578.7	66.5	1.000012
77500.0	13.8	-52.5		53.3	578.7	67.3	1.000012
77600.0	13.6	-52.4		53.0	578.8	68.3	1.000012
77700.0	13.4	-52.4		52.9	578.8	69.2	1.000012
77800.0	13.3	-52.4		52.5	578.8	70.1	1.000012
77900.0	13.1	-52.4		52.3	578.9	70.9	1.000012
78000.0	13.0	-52.3		52.0	578.9	71.8	1.000012
78100.0	12.8	-52.3		51.8	578.9	72.6	1.000012
78200.0	12.7	-52.3		51.5	579.0	73.6	1.000011
78300.0	12.5	-52.3		51.3	579.0	74.2	1.000011
78400.0	12.4	-52.3		51.0	579.0	74.2	1.000011
78500.0	12.2	-52.2		50.8	579.0	75.7	1.000011
78600.0	12.1	-52.2		50.6	579.1	76.4	1.000011
78700.0	11.9	-52.2		50.2	579.1	77.1	1.000011
78800.0	11.8	-52.2		50.1	579.1	77.2	1.000011
78900.0	11.6	-52.1		49.8	579.2	78.3	1.000011
79000.0	11.5	-52.1		49.6	579.2	78.6	1.000011
79100.0	11.3	-52.1		49.4	579.2	78.9	1.000011
79200.0	11.2	-52.1		49.1	579.2	79.2	1.000011
79300.0	11.0	-52.1		48.9	579.3	79.4	1.000011
79400.0	10.9	-52.0		48.7	579.3	79.7	1.000011
79500.0	10.7	-52.0		48.4	579.3	80.0	1.000011
79600.0	10.6	-52.0		48.2	579.4	80.3	1.000011
79700.0	10.5	-52.0		48.0	579.4	80.6	1.000011
79800.0	10.3	-51.9		47.7	579.4	80.8	1.000011

STATION ALTITUDE 2039.00 FEET MSL  
5 JULY 53 0823 EDT  
ASCENSION NO. 337

UPPER AIR DATA  
1500ZPUS37  
WHITE SANDS

GEODETIC COORDINATES  
32.63063 LAT DEG  
106.37033 LON DEG

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
74000.0	70.2	-51.7		47.5	579.4	81.1	27.9	1.000011
81000.0	30.0	-51.9		47.3	579.5	81.4	27.9	1.000011
86100.0	25.9	-51.9		47.1	579.5	81.7	28.0	1.000010
90200.0	22.7	-51.8		46.9	579.5	81.9	28.0	1.000010
91700.0	22.6	-51.8		46.6	579.6	82.2	29.0	1.000010
80400.0	29.5	-51.6		46.4	579.6	82.3	28.2	1.000010
80500.0	29.3	-51.8		46.2	579.7	82.4	28.5	1.000010
80500.0	29.2	-51.7		45.9	579.7	82.5	28.7	1.000013
80700.0	29.1	-51.7		45.7	579.7	82.5	29.0	1.000013
80800.0	28.9	-51.7		45.5	579.6	82.6	29.2	1.000010
81900.0	23.8	-51.7		45.3	579.8	82.7	29.5	1.000010
81000.0	20.7	-51.6		45.1	579.8	82.7	29.7	1.000013
81100.0	25.5	-51.6		44.9	579.9	82.8	29.9	1.000010
81200.0	28.4	-51.6		44.6	579.9	82.9	30.2	1.000013
81300.0	28.3	-51.5		44.4	579.9	82.9	30.4	1.000013
81400.0	28.1	-51.5		44.2	580.0	83.0	30.7	1.000013
81500.0	28.0	-51.5		44.0	580.0	83.1	30.9	1.000013
81600.0	27.9	-51.5		43.8	580.1	83.1	31.1	1.000010
81700.0	27.7	-51.4		43.6	580.1	83.2	31.4	1.000010
81800.0	27.6	-51.4		43.4	580.1	83.2	31.5	1.000010
81900.0	27.5	-51.3		43.2	580.3	83.3	31.6	1.000010
82000.0	27.4	-51.2		42.9	580.4	83.3	31.6	1.000010
82100.0	27.2	-51.1		42.7	580.5	83.4	31.7	1.000010
82200.0	27.1	-51.0		42.5	580.7	83.4	31.7	1.000009
82300.0	27.0	-50.9		42.3	580.8	83.4	31.8	1.000009
82400.0	26.9	-50.9		42.1	581.0	83.5	31.8	1.000009
82500.0	26.7	-50.7		41.9	581.1	83.5	31.9	1.000009
82600.0	26.6	-50.5		41.7	581.2	83.5	31.9	1.000009
82700.0	26.5	-50.4		41.4	581.4	83.6	32.0	1.000009
82800.0	26.4	-50.3		41.2	581.5	83.6	32.0	1.000009
82900.0	26.3	-50.2		41.0	581.7	83.7	32.0	1.000009
83000.0	26.1	-50.1		40.8	581.8	83.7	32.1	1.000009
83100.0	26.0	-50.0		40.5	582.0	83.7	32.1	1.000009
83200.0	25.9	-49.9		40.4	582.1	83.8	32.2	1.000009
83300.0	25.8	-49.8		40.2	582.2	83.8	32.3	1.000009
83400.0	25.7	-49.7		40.0	582.4	83.9	32.4	1.000009
83500.0	25.5	-49.6		39.8	582.5	84.0	32.6	1.000009
83600.0	25.4	-49.5		39.6	582.7	84.1	32.6	1.000009
83700.0	25.3	-49.4		39.4	582.8	84.2	32.9	1.000009
83800.0	25.2	-49.3		39.2	582.9	84.3	33.1	1.000009



GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37053 LON DEG

UPPER AIR DATA  
190500Z  
WHITE SANDS

# TABLE 10 CONT

STATION ALTITUDE 3019.00 FEET MSL  
5 JULY 55 0823 MDT  
ASCENSION NO. 337

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SOUND SPEED KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
82000.0	25.1	-49.1	32.0	583.1	84.4	84.4	33.2	1.000009
84000.0	25.0	-49.0	31.9	583.2	84.5	84.5	33.4	1.000009
86000.0	24.9	-48.9	31.8	583.3	84.6	84.6	33.5	1.000009
88000.0	24.7	-48.5	31.6	583.5	84.7	84.7	33.7	1.000009
90000.0	24.6	-48.7	31.5	583.6	84.8	84.8	33.8	1.000009
92000.0	24.5	-48.6	31.4	583.8	84.9	84.9	34.0	1.000009
94000.0	24.4	-48.5	31.3	583.9	85.0	85.0	34.1	1.000009
96000.0	24.3	-48.4	31.2	584.1	85.1	85.1	34.3	1.000009
98000.0	24.2	-48.3	31.1	584.2	85.2	85.2	34.4	1.000009
100000.0	24.1	-48.2	31.0	584.3	85.3	85.3	34.6	1.000009
102000.0	24.0	-48.1	30.9	584.5	85.4	85.4	34.7	1.000009
104000.0	23.9	-48.0	30.8	584.6	85.5	85.5	34.8	1.000009
106000.0	23.7	-47.8	30.7	584.8	85.6	85.6	34.9	1.000009
108000.0	23.6	-47.7	30.6	584.9	85.7	85.7	35.0	1.000009
110000.0	23.5	-47.6	30.5	585.0	85.8	85.8	35.1	1.000009
112000.0	23.4	-47.5	30.4	585.2	85.9	85.9	35.2	1.000009
114000.0	23.3	-47.4	30.3	585.3	86.0	86.0	35.3	1.000009
116000.0	23.2	-47.3	30.2	585.5	86.1	86.1	35.4	1.000009
118000.0	23.1	-47.2	30.1	585.6	86.2	86.2	35.5	1.000009
120000.0	23.0	-47.1	30.0	585.7	86.3	86.3	35.6	1.000009
122000.0	22.9	-47.0	29.9	585.9	86.4	86.4	35.7	1.000009
124000.0	22.8	-46.9	29.8	586.0	86.5	86.5	35.8	1.000009
126000.0	22.7	-46.8	29.7	586.2	86.6	86.6	35.9	1.000009
128000.0	22.6	-46.7	29.6	586.3	86.7	86.7	36.0	1.000009
130000.0	22.5	-46.6	29.5	586.4	86.8	86.8	36.1	1.000009
132000.0	22.4	-46.5	29.4	586.6	86.9	86.9	36.2	1.000009
134000.0	22.3	-46.4	29.3	586.7	87.0	87.0	36.3	1.000009
136000.0	22.2	-46.3	29.2	586.9	87.1	87.1	36.4	1.000009
138000.0	22.1	-46.2	29.1	587.0	87.2	87.2	36.5	1.000009
140000.0	22.0	-46.1	29.0	587.1	87.3	87.3	36.6	1.000009
142000.0	21.9	-46.0	28.9	587.3	87.4	87.4	36.7	1.000009
144000.0	21.8	-45.9	28.8	587.4	87.5	87.5	36.8	1.000009
146000.0	21.7	-45.8	28.7	587.5	87.6	87.6	36.9	1.000009
148000.0	21.6	-45.7	28.6	587.7	87.7	87.7	37.0	1.000009
150000.0	21.5	-45.6	28.5	587.8	87.8	87.8	37.1	1.000009
152000.0	21.4	-45.5	28.4	588.0	87.9	87.9	37.2	1.000009
154000.0	21.3	-45.4	28.3	588.1	88.0	88.0	37.3	1.000009
156000.0	21.2	-45.3	28.2	588.3	88.1	88.1	37.4	1.000009
158000.0	21.1	-45.2	28.1	588.4	88.2	88.2	37.5	1.000009
160000.0	21.0	-45.1	28.0	588.5	88.3	88.3	37.6	1.000009

STATION ALTITUDE 3019.00 FEET MSL  
5 JULY 83 0823 MDZ  
ASCENSION NO. 337

UPPER AIR DATA  
12C UZJ37  
WHITE SANDS

GEOMETRIC COORDINATES  
32.40047 LAT DEG  
106.37033 LONG DEG

# TABLE 10 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND METER	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
87900.0	20.9	-44.6		31.2	588.7	91.0	34.8	1.000007
88100.0	20.8	-44.7		31.7	588.9	91.6	34.7	1.000007
88300.0	20.7	-44.8		31.5	588.9	92.2	34.7	1.000007
88500.0	20.6	-44.5		31.4	589.1	92.8	34.7	1.000007
88700.0	20.5	-44.4		31.2	589.2	93.4	34.8	1.000007
88900.0	20.4	-44.3		31.1	589.4	93.9	34.9	1.000007
89100.0	20.3	-44.2		30.9	589.5	94.5	35.0	1.000007
89300.0	20.2	-44.1		30.8	589.6	95.0	35.1	1.000007
89500.0	20.1	-44.0		30.5	589.8	95.5	35.2	1.000007
89700.0	20.0	-43.9		30.5	589.9	96.1	35.4	1.000007
89900.0	20.0	-43.8		30.7	590.0	96.6	35.5	1.000007
90100.0	19.9	-43.8		30.2	590.0	97.1	35.6	1.000007
90300.0	19.8	-43.8		30.0	590.0	97.6	35.7	1.000007
90500.0	19.7	-43.8		29.9	590.0	98.2	35.8	1.000007
90700.0	19.6	-43.8		29.8	590.0	98.7	36.0	1.000007
90900.0	19.5	-43.8		29.6	590.0	99.2	36.1	1.000007
91100.0	19.4	-43.8		29.5	590.0	99.7	36.3	1.000007
91300.0	19.3	-43.8		29.2	590.0	100.2	36.4	1.000007
91500.0	19.2	-43.8		29.1	590.0	100.7	36.5	1.000007
91700.0	19.1	-43.8		29.0	590.0	101.2	36.7	1.000006
91900.0	19.0	-43.8		29.0	590.0	101.6	36.8	1.000006
92100.0	18.9	-43.8		28.8	590.0	101.9	36.7	1.000006
92300.0	18.8	-43.8		28.7	590.0	102.2	36.6	1.000006
92500.0	18.7	-43.8		28.5	590.0	102.7	36.5	1.000006
92700.0	18.6	-43.8		28.5	590.0	103.0	36.4	1.000006
92900.0	18.5	-43.8		28.2	590.1	103.7	36.2	1.000005
93100.0	18.4	-43.7		28.1	590.1	103.5	36.1	1.000005
93300.0	18.3	-43.7		27.9	590.1	103.9	36.0	1.000006
93500.0	18.2	-43.7		27.8	590.1	104.1	35.9	1.000006
93700.0	18.1	-43.7		27.7	590.1	104.4	35.8	1.000006
93900.0	18.0	-43.7		27.5	590.1	104.7	35.8	1.000006
94100.0	17.9	-43.7		27.4	590.1	105.0	35.7	1.000006
94300.0	17.8	-43.7		27.3	590.1	105.2	35.6	1.000006
94500.0	17.7	-43.7		27.2	590.1	105.8	35.5	1.000005
94700.0	17.6	-43.7		27.0	590.1	106.1	35.4	1.000005
94900.0	17.5	-43.7		26.9	590.1	106.4	35.3	1.000006
95100.0	17.4	-43.7		26.8	590.1	106.7	35.2	1.000006
95300.0	17.3	-43.7		26.7	590.1	107.0	35.1	1.000006
95500.0	17.2	-43.7		26.5	590.1			

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37333 LON DEG

UPPER AIR DATA  
1800Z 0337  
UNIT: GMS

TABLE 10 CONT

STATION ALTITUDE 2929.00 FEET MSL  
5 JULY 83 0023 EDT  
ASCENSION NO. 337

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT CELSIUS CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
91900.0	17.4	-43.7		27.5	590.1	107.3	34.9	1.000005
92000.0	17.4	-43.7		27.4	590.1	107.6	34.2	1.000005
92100.0	17.3	-43.7		27.2	590.1	108.0	34.7	1.000005
92200.0	17.2	-43.7		26.9	590.1	108.4	34.6	1.000005
92300.0	17.1	-43.7		26.8	590.1	108.6	34.4	1.000005
92400.0	17.1	-43.7		26.9	590.1	108.9	34.3	1.000005
92500.0	17.0	-43.7		25.8	590.1	109.3	34.2	1.000005
92600.0	16.9	-43.7		25.7	590.1	109.6	34.1	1.000005
92700.0	16.8	-43.7		25.5	590.1	109.9	34.0	1.000005
92800.0	16.7	-43.7		25.4	590.1	110.2	33.9	1.000005
92900.0	16.7	-43.7		25.3	590.1	110.6	33.8	1.000005
93000.0	16.6	-43.7		25.2	590.1	110.9	33.7	1.000005
93100.0	16.5	-43.7		25.1	590.2	111.3	33.6	1.000005
93200.0	16.4	-43.7		25.0	590.2	111.6	33.5	1.000005
93300.0	16.4	-43.7		24.9	590.2	111.9	33.4	1.000005
93400.0	16.3	-43.7		24.7	590.2	111.7	32.1	1.000005
93500.0	16.2	-43.7		24.6	590.2	111.4	32.8	1.000005
93600.0	16.2	-43.7		24.5	590.2	111.2	32.5	1.000005
93700.0	16.1	-43.7		24.4	590.2	110.9	32.2	1.000005
93800.0	16.0	-43.7		24.3	590.2	110.6	31.9	1.000005
93900.0	15.9	-43.6		24.2	590.2	110.3	31.6	1.000005
94000.0	15.9	-43.6		24.1	590.2	110.1	31.4	1.000005
94100.0	15.8	-43.6		24.0	590.2	109.8	31.1	1.000005
94200.0	15.7	-43.6		23.9	590.2	109.5	30.8	1.000005
94300.0	15.7	-43.6		23.8	590.2	109.2	30.5	1.000005
94400.0	15.6	-43.6		23.7	590.2	108.9	30.2	1.000005
94500.0	15.5	-43.6		23.6	590.2	108.5	29.9	1.000005
94600.0	15.4	-43.6		23.4	590.2	108.2	29.6	1.000005
94700.0	15.4	-43.6		23.3	590.2	107.9	29.3	1.000005
94800.0	15.3	-43.6		23.2	590.2	107.6	29.1	1.000005
94900.0	15.2	-43.6		23.1	590.2	107.3	28.8	1.000005
95000.0	15.2	-43.6		23.0	590.2	106.9	28.5	1.000005
95100.0	15.1	-43.6		22.9	590.2	106.3	28.3	1.000005
95200.0	15.0	-43.6		22.8	590.2	105.7	28.0	1.000005
95300.0	15.0	-43.6		22.7	590.2	105.1	27.8	1.000005
95400.0	14.9	-43.6		22.6	590.2	104.4	27.4	1.000005
95500.0	14.8	-43.6		22.5	590.2	103.8	27.4	1.000005
95600.0	14.8	-43.5		22.4	590.3	103.2	27.2	1.000005
95700.0	14.7	-43.6		22.3	590.3	102.5	27.0	1.000005
95800.0	14.6	-43.5		22.2	590.3	101.8	26.8	1.000005

UPPER AIR DATA  
1000000000  
WHITE SANDS

STATION ALTITUDE 5959.70 FEET MSL  
5 JULY 83 0823 EDT  
ASCENSION NO. 337

GEOMETRIC COORDINATES  
32.63065 LAT DEG  
102.37033 LONG DEG

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> AT SEA	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
92900.0	14.0	-43.5		23.1	590.3	101.1	25.6	1.000005
92800.0	14.5	-43.5		23.0	590.4	100.5	26.5	1.000005
92700.0	14.6	-43.5		21.9	590.4	99.8	26.3	1.000005
92600.0	14.4	-43.5		21.8	590.4	99.0	26.1	1.000005
92500.0	14.3	-43.4		21.7	590.5	98.3	25.9	1.000005
92400.0	14.2	-43.4		21.6	590.5	97.6	25.8	1.000005
92300.0	14.2	-43.4		21.5	590.5	96.9	25.6	1.000005
92200.0	14.1	-43.4		21.4	590.5	96.1	25.4	1.000005
92100.0	14.1	-43.4		21.3	590.5	95.4	25.3	1.000005
92000.0	14.0	-43.3		21.2	590.6	94.5	25.2	1.000005
91900.0	13.9	-43.3		21.1	590.6	93.6	25.2	1.000005
91800.0	13.9	-43.3		21.0	590.6	92.7	25.2	1.000005
91700.0	13.8	-43.3		20.9	590.7	91.7	25.2	1.000005
91600.0	13.7	-43.2		20.8	590.7	90.8	25.2	1.000005
91500.0	13.7	-43.2		20.7	590.7	89.9	25.2	1.000005
91400.0	13.6	-43.2		20.6	590.8	89.0	25.3	1.000005
91300.0	13.6	-43.2		20.5	590.8	88.1	25.3	1.000005
91200.0	13.5	-43.2		20.5	590.8	87.2	25.4	1.000005
91100.0	13.5	-43.1		20.4	590.8	86.3	25.4	1.000005
91000.0	13.4	-43.1		20.3	590.9	85.4	25.5	1.000005
90900.0	13.3	-43.1		20.2	590.9	84.5	25.5	1.000004
90800.0	13.3	-43.1		20.1	590.9	83.6	25.6	1.000004
90700.0	13.2	-43.0		20.0	591.0	82.7	25.6	1.000004
90600.0	13.1	-43.0		19.9	591.0	81.8	25.7	1.000004
90500.0	13.1	-43.0		19.8	591.0	80.9	25.8	1.000004
90400.0	13.0	-43.0		19.7	591.0	80.0	25.9	1.000004
90300.0	13.0	-43.0		19.6	591.1	79.3	25.9	1.000004
90200.0	12.9	-42.9		19.5	591.1	78.8	25.9	1.000004
90100.0	12.9	-42.9		19.5	591.1	78.3	25.9	1.000004
90000.0	12.8	-42.9		19.4	591.2	77.7	25.9	1.000004
89900.0	12.7	-42.9		19.4	591.2	77.2	25.9	1.000004
89800.0	12.7	-42.9		19.3	591.2	76.7	25.9	1.000004
89700.0	12.6	-42.8		19.1	591.2	76.2	25.7	1.000004
89600.0	12.6	-42.8		19.0	591.3	75.7	25.7	1.000004
89500.0	12.5	-42.8		18.9	591.3	75.1	25.7	1.000004
89400.0	12.5	-42.8		18.8	591.3	74.6	25.6	1.000004
89300.0	12.4	-42.7		18.8	591.3	74.1	25.6	1.000004
89200.0	12.4	-42.7		18.7	591.4	73.5	25.6	1.000004
89100.0	12.3	-42.7		18.6	591.4	73.0	25.6	1.000004
89000.0	12.2	-42.7		18.5	591.4	72.5	25.6	1.000004

GEODETIC COORDINATES  
32.60043 LAT DEG  
106.37023 LON DEG

UPPER AIR DATA  
190000Z  
WHITE SANDS

# TABLE 10 CONT

STATION ALTITUDE 3000.00 FEET MSL  
5 JULY 65 0823 MDT  
ASCENSION NO. 337

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
9900.00	12.2	-42.7		17.4	591.5	71.9	25.4	1.000004
10000.00	12.1	-42.5		17.3	591.5	71.4	25.6	1.000004
10100.00	12.1	-42.0		18.3	591.5	70.0	25.5	1.000004
10200.00	12.0	-42.0		18.2	591.5	70.3	25.5	1.000004
10300.00	12.0	-42.0		18.1	591.6	70.3	25.5	1.000004
10400.00	11.9	-42.5		18.0	591.6	71.3	25.5	1.000004
10500.00	11.9	-42.5		17.9	591.6	71.8	25.5	1.000004
10600.00	11.8	-42.5		17.8	591.7	72.4	25.5	1.000004
10700.00	11.8	-42.5		17.8	591.7	72.9	25.6	1.000004
10800.00	11.7	-42.5		17.7	591.7	73.4	25.6	1.000004
10900.00	11.7	-42.4		17.6	591.7	74.0	25.6	1.000004
11000.00	11.6	-42.4		17.5	591.8	74.5	25.6	1.000004
11100.00	11.5	-42.4		17.4	591.8	75.0	25.6	1.000004
11200.00	11.5	-42.4		17.4	591.8	75.5	25.6	1.000004
11300.00	11.4	-42.4		17.3	591.8	76.1	25.7	1.000004
11400.00	11.4	-42.3		17.2	591.9	76.6	25.7	1.000004
11500.00	11.3	-42.3		17.1	591.9	77.1	25.7	1.000004
11600.00	11.3	-42.3		17.0	591.9	77.6	25.7	1.000004
11700.00	11.2	-42.3		17.0	592.0	78.2	25.8	1.000004
11800.00	11.2	-42.2		16.9	592.0	78.7	25.8	1.000004
11900.00	11.1	-42.2		16.8	592.0	79.2	25.8	1.000004
12000.00	11.1	-42.2		16.7	592.0	79.3	26.0	1.000004
12100.00	11.0	-42.2		16.7	592.1	78.9	26.3	1.000004
12200.00	11.0	-42.2		16.6	592.1	78.5	26.6	1.000004
12300.00	10.9	-42.1		16.5	592.1	78.1	27.0	1.000004
12400.00	10.9	-42.1		16.4	592.2	77.7	27.3	1.000004
12500.00	10.8	-42.1		16.4	592.2	77.3	27.6	1.000004
12600.00	10.8	-42.1		16.3	592.2	76.9	28.0	1.000004
12700.00	10.7	-42.1		16.2	592.2	76.5	28.3	1.000004
12800.00	10.7	-42.0		16.1	592.3	76.2	28.7	1.000004
12900.00	10.7	-42.0		16.1	592.3	75.9	29.0	1.000004
13000.00	10.6	-42.0		16.1	592.3	75.5	29.3	1.000004
13100.00	10.6	-42.0		15.9	592.3	75.2	29.7	1.000004
13200.00	10.5	-41.9		15.8	592.4	74.9	30.0	1.000004
13300.00	10.5	-41.9		15.8	592.4	74.6	30.4	1.000004
13400.00	10.4	-41.9		15.7	592.5	74.3	30.7	1.000004
13500.00	10.4	-41.9		15.6	592.5	74.0	31.0	1.000004
13600.00	10.3	-41.9		15.5	592.5	73.7	31.4	1.000004
13700.00	10.3	-41.8		15.5	592.5	73.4	31.7	1.000004
13800.00	10.2	-41.6		15.4	592.5			1.000004

GEODETIC COORDINATES  
32.40047 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
150000Z37  
WMTT SANDS

TABLE 10 CONT

STATION ALTITUDE 529.00 FEET MSL  
5 JULY 83 0823 EDT  
ASCENSION NO. 337

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGR(F)	SPEED KNOTS	
10500.0	10.2	-41.9		15.3	592.6			1.000003
10400.0	10.1	-41.6		15.3	592.6			1.000003
10300.0	10.1	-41.7		15.2	592.6			1.000003
10200.0	10.1	-41.7		15.1	592.7			1.000003
10100.0	10.0	-41.7		15.1	592.7			1.000003
10000.0	10.0	-41.7		15.0	592.6			1.000003
9900.0	9.9	-41.8		14.9	592.6			1.000003
9800.0	9.9	-41.5		14.9	592.5			1.000003
9700.0	9.9	-41.9		14.9	592.5			1.000003
9600.0	9.8	-41.9		14.7	592.4			1.000003
9500.0	9.7	-42.0		14.7	592.3			1.000003
9400.0	9.7	-42.0		14.6	592.3			1.000003
9300.0	9.7	-42.1		14.5	592.2			1.000003
9200.0	9.6	-42.1		14.5	592.2			1.000003
9100.0	9.6	-42.2		14.4	592.1			1.000003
9000.0	9.5	-42.2		14.4	592.0			1.000003
8900.0	9.5	-42.2		14.3	592.0			1.000003
8800.0	9.4	-42.3		14.3	591.9			1.000003
8700.0	9.4	-42.3		14.2	591.9			1.000003
8600.0	9.4	-42.4		14.1	591.8			1.000003
8500.0	9.3	-42.4		14.1	591.7			1.000003
8400.0	9.3	-42.5		14.0	591.7			1.000003
8300.0	9.2	-42.5		14.0	591.6			1.000003
8200.0	9.2	-42.6		13.9	591.6			1.000003
8100.0	9.1	-42.6		13.8	591.5			1.000003
8000.0	9.1	-42.7		13.8	591.4			1.000003
7900.0	9.1	-42.7		13.7	591.4			1.000003
7800.0	9.0	-42.8		13.7	591.3			1.000003

STATION ALTITUDE 5239.00 FEET MSL  
5 JULY 83  
ASCENSION NO. 327

MAINTENANCE LEVELS  
19.00/27.32  
WHITE SANDS

0823 MDT

327

TABLE 11

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES (TN)	SPEED KNOTS
937.0	5272.	22.7	53.	338.9	4.3
900.0	6816.	19.0	56.	220.3	3.9
750.0	8636.	18.5	77.	74.0	12.4
700.0	10563.	15.1	22.	73.0	13.9
650.0	12502.	9.3	30.	74.9	16.6
600.0	14751.	4.2	45.	49.3	15.6
550.0	17062.	-2.0	79.	19.0	19.0
500.0	19538.	-5.3	27.	47.2	12.7
450.0	22216.	-12.4	44.	5.1	13.3
400.0	25140.	-17.3	20.	53.4	17.0
350.0	28382.	-23.9	13.	56.8	18.3
300.0	32011.	-37.6	21.	70.7	14.4
250.0	36138.	-42.5		96.7	11.1
200.0	40854.	-54.2		117.8	13.3
175.0	43737.	-59.4		145.3	15.6
150.0	46842.	-55.4		137.1	14.9
125.0	50419.	-59.7		151.8	7.1
100.0	54801.	-67.9		347.9	4.4
30.0	59240.	-63.6		60.3	11.9
70.0	61048.	-62.1		101.6	17.6
60.0	62133.	-58.2		57.1	13.7
50.0	63972.	-57.7		94.3	20.4
40.0	7575.	-53.3		79.1	18.3
30.0	79577.	-51.9		61.3	27.9
25.0	85567.	-49.1		64.4	33.2
20.0	90429.	-43.8		96.1	35.4
15.0	94772.	-43.6		105.7	28.0
10.0	103752.	-41.7			

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.77 FEET MSL  
5 JULY 83 1000 EDT  
ASCENSION NO. 95

SIGNIFICANT LEVEL DATA  
1060190035  
LC-37

TABLE 12

GEODETIC COORDINATES  
32.40175 LAT DEG  
106.31232 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEW POINT CENTIGRADE	
863.2	27.7	13.3	41.0
827.8	25.0	12.1	42.0
850.0	23.8	11.2	45.0
809.4	20.9	8.5	45.0
799.5	20.6	8.3	45.0
760.0	17.5	3.4	39.0
757.1	16.5	1.0	35.0
750.1	17.8	-9	28.0
700.0	14.5	-3.8	28.0
655.5	9.6	-8.5	27.0
610.1	4.5	-6.4	45.0
563.5	-1.8	-11.2	46.0
547.5	-3.8	-10.0	52.0
540.1	-4.4	-9.8	66.0
524.0	-4.2	-22.7	22.0
500.0	-6.2	-24.9	21.0



GEODETIC COORDINATES  
32.40175 LAT DEG  
106.31232 LON DEG

UPPER AIR DATA  
100100000  
LC-37

STATION ALTITUDE 4051.77 FEET MSL  
5 JULY 83 1000 MDT  
ASCENSION NO. 95

TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TV)	SPEED KNOTS	
4051.4	583.9	27.7	41.0	1016.8	677.9	350.0	11.1	1.000290
4500.0	570.3	26.3	41.8	1036.3	676.2	349.6	10.5	1.000285
5000.0	555.4	24.5	44.1	955.3	674.1	349.0	9.9	1.000280
5500.0	540.6	23.1	45.0	923.7	672.5	348.4	9.3	1.000274
6000.0	526.1	22.1	45.0	900.3	671.3	352.8	7.5	1.000268
6500.0	511.7	21.1	45.0	956.1	670.0	30.3	3.9	1.000262
7000.0	497.6	20.5	44.7	941.5	669.2	77.8	4.9	1.000257
7500.0	483.6	19.4	42.6	928.9	667.9	85.7	7.7	1.000249
8000.0	469.8	18.3	40.5	916.4	666.5	86.0	10.7	1.000242
8500.0	456.3	16.6	34.2	904.7	664.3	84.2	14.0	1.000231
9000.0	442.9	17.3	28.0	892.4	664.9	82.7	15.7	1.000223
9500.0	429.7	16.5	28.0	875.3	663.9	80.4	15.9	1.000219
10000.0	416.7	15.6	28.0	863.4	662.9	79.3	15.5	1.000215
10500.0	404.0	14.8	28.0	849.7	661.9	78.3	14.6	1.000211
11000.0	391.4	13.6	27.8	839.1	660.5	78.2	14.5	1.000207
11500.0	378.9	12.2	27.5	827.0	658.8	79.5	15.7	1.000202
12000.0	366.7	10.9	27.3	816.2	657.2	78.6	17.1	1.000198
12500.0	354.7	9.5	27.3	805.4	655.6	75.8	19.0	1.000195
13000.0	342.7	8.2	32.0	794.2	654.1	72.2	20.4	1.000194
13500.0	330.9	6.9	36.6	783.2	652.5	67.7	21.4	1.000192
14000.0	319.4	5.6	41.2	772.4	651.1	62.3	21.5	1.000190
14500.0	308.0	4.0	45.1	762.4	649.3	55.8	21.0	1.000188
15000.0	296.6	1.3	45.5	755.7	646.1	49.8	20.5	1.000184
15500.0	285.4	-1.3	45.9	749.1	642.8	44.0	20.0	1.000180
16000.0	274.3	-2.3	50.0	737.5	641.7	41.8	20.3	1.000178
16500.0	263.4	-2.9	54.6	725.0	641.0	40.4	20.7	1.000176
17000.0	252.7	-3.5	59.6	712.7	640.3	38.1	20.9	1.000173
17500.0	242.2	-4.2	64.9	701.0	639.5	35.8	21.2	1.000171
18000.0	231.9	-4.3	63.7	688.2	639.2	33.3	19.0	1.000163
18500.0	221.7	-4.4	21.9	675.8	638.9	30.0	16.5	1.000155
19000.0	211.7	-5.2	21.5	664.9	637.9			1.000153
19500.0	201.9	-6.0	21.1	654.2	636.9			1.000150

STATION ALTITUDE 4051.37 FEET MSL  
5 JULY 83  
ASCENSION NO. 95

MANDATORY LEVELS  
1860180395  
LC-37

TABLE 14

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5179.	23.8	11.2	45.	348.8	9.7	
800.0	5908.	20.6	8.3	45.	75.5	4.5	
750.0	6726.	17.8	-0.9	28.	83.7	15.5	
700.0	7649.	14.5	-3.8	28.	77.9	14.3	
650.0	8682.	9.0	-8.0	29.	74.9	19.7	
600.0	9835.	2.1	-14.4	45.	51.6	20.7	
550.0	11108.	-3.7	-19.1	61.	37.6	21.0	
500.0	12569.	-6.2	-24.9	21.			

